

MASS.  
DOCS.  
COLL.



MASSACHUSETTS  
HIGHWAY COMMISSION

---

1904

LIBRARY

OF THE



MASSACHUSETTS  
AGRICULTURAL  
COLLEGE

SOURCE Mass. Highway Com.

625.7

M38

1903

625.7625.7 M38  
1903

" M.J.  
MAY

" M.J. Foley  
MAY 12 1928

Digitized by the Internet Archive  
in 2010 with funding from  
Boston Library Consortium Member Libraries

ELEVENTH ANNUAL REPORT

OF THE

MASSACHUSETTS

HIGHWAY COMMISSION.

1053

---

JANUARY, 1904.



BOSTON :

WRIGHT & POTTER PRINTING CO., STATE PRINTERS,

18 POST OFFICE SQUARE.

1904.

67 57  
CHAP. 212

APPROVED BY  
THE STATE BOARD OF PUBLICATION.

# Commonwealth of Massachusetts.

---

*To the Honorable Senate and House of Representatives of the Commonwealth  
of Massachusetts in General Court assembled.*

The undersigned commissioners, appointed under the provisions of chapter 476 of the Acts of 1893, entitled “An Act to provide for the appointment of a Highway Commission to improve the public roads, and to define its powers and duties,” and under the provisions of chapter 474 of the Acts of 1900, entitled “An Act relative to the Massachusetts Highway Commission,” herewith submit their eleventh annual report.

WILLIAM E. McCLINTOCK.

HAROLD PARKER.

JOHN H. MANNING.

BOSTON, MASS., Dec. 31, 1903.





# ANNUAL REPORT

## OF THE

### MASSACHUSETTS HIGHWAY COMMISSION.

---

In accordance with the provisions of the act of April 1, 1902, appropriating for the construction and maintenance of State highways, \$100,000 became available for the use of the commission on Jan. 1, 1903. On April 30, 1903, the sum of \$2,250,000 was appropriated by the Legislature for the construction of State highways for a period of five years, beginning with the year 1903; the statute providing that of this sum not more than \$450,000 shall be expended in any one year. The commission, therefore, has had the sum of \$550,000 which could be used for work during the year. In addition to the \$100,000 held over from the appropriation of 1902, considerable sums allotted for expenditure during that year were actually disbursed during the year 1903, unavoidable delays having prevented the completion of several contracts.

By an act approved May 26, 1903 (chapter 384, Acts of 1903), the sum of \$100,000 was appropriated for the construction of the State highway in Lynn between the Saugus River and Commercial Street.

Additional lay-outs were made during 1903, amounting to 391,605 feet (74.17 miles), bringing the grand total up to 2,666,545 feet (505.07 miles). The number of miles of road finished during the year was approximately 67, making a total of about 482 miles of completed State highway at the end of the year 1903. On most of the remaining 23 miles laid out but not completed the work is in various stages of progress, although in a few instances no work will be done under the contracts before the coming spring.

Since the passage of the "small town act," in 1900, 54.47 miles of road in the "small towns" have been improved.

## MEETINGS OF THE COMMISSION.

The commission has held 76 meetings at its office in Boston during the past year, besides many others at different points in the State. The regular county hearings provided for in the statutes have generally been well attended.

## CONTRACTS.

All work done by the commission must be done by contract, either with the town or city authorities, or, after due advertisement, with private contractors.

During the year 77 contracts for State highways were entered into, of which 27 were with town or city authorities and 50 with private individuals or corporations.

## PETITIONS.

The total number of petitions for the location and construction of State highways up to the date of this report is 646. Forty-three new petitions were received during the year 1903. These petitions cover altogether 1,663.26 miles of road, and they are from 282 towns and 25 cities. The petitions received during the past year cover 97.07 miles of road not previously petitioned for.

## STREET RAILWAYS.

There are at the present time street railways operating on State roads in 111 different cities and towns. In 6 of these municipalities there are two different companies. The length of street railway track in the State on Sept. 30, 1903, according to the Massachusetts Railroad Commissioners, was 2,620.96 miles.

## COUNTY ASSESSMENTS.

In accordance with the provisions of the statutes, the several counties in which State roads are built are required to repay to the State one-quarter of the amount expended during the year. The time of this repayment may, if desired, extend over six years from the date of the assessment; but in several instances, including some of those in which the amount of the

assessment is greatest, the counties have preferred to pay the entire sum due at the end of each year. The amount assessed upon the counties during the year 1903 was \$143,351.38.

#### CONSTRUCTION.

No material change has been made in the methods of building roads during the past year. Close observations have been made on the telford foundations, placed under the earlier roads, to determine the accuracy of the commission's judgment, as indicated in the last year's report. Nothing has yet developed that would warrant a return to the use of telfording.

On heavy, wet soils a centre "V"-shaped drain has been substituted for the side drains and telfording. In building this type of road the earth is loosened and thrown out toward the sides, so as to give a "V"-shaped trench, with its greatest depth in the centre of the proposed roadway. Narrow trenches are cut through the sides of this centre trench, at intervals of 50 or more feet, connecting its lowest part with the gutters on the side, and placed at a depth and slope to thoroughly remove all water. The centre and cross trenches are filled with field or wall stone, the depth of this stone varying from 12 to 18 inches in the centre, and from 6 to 12 inches on the sides, the thickness being dependent upon the character of the soil in the sub-grade. The tops of these large stones are given a crown to receive the surfacing material.

So far as present observations go, this "V"-shaped drain furnishes drainage and foundation as effectively as do the side drains and telfording. This being true, it becomes simply a matter of cost when deciding between the two methods.

The average cost of side drains, on 20 contracts in 1903, was 47 cents per foot. The average cost of telfording, on 28 contracts in 1900 (the last year any of this kind of work was done), was 32.7 cents per square yard. With the prices as herein shown, the cost per lineal foot for telfording and two side drains is \$1.267, or 83.8 cents with the telfording and one side drain.

In the building of the "V"-shaped drain it is necessary to excavate about one-quarter of a cubic yard of earth and place about one-half a cubic yard of stone for each lineal foot of

road. The average cost of earth excavation, on 73 contracts, was 43.9 cents per cubic yard; of stone, 76.7 cents per cubic yard. Based on these prices, the cost per lineal foot for the "V"-shaped drain is 49.3 cents.

By comparison it will be seen that this type of road costs 77.4 cents a lineal foot less than the telfording and two drains, and 34.5 cents less than the telfording and one drain.

On this coarse stone the surfacing material of earth, gravel or broken stone is spread, in the manner described in previous reports.

The commission has from time to time built roads of gravel. The intention has been to surface all or any part of these with broken stone, if at any time they should fail to remain in good condition, at a reasonable cost. It was thought to be more economical to allow the gravel to be thoroughly compacted before placing the broken stone over it, as less loss of stone in the sub-grade would result.

A part of the Brimfield road, built of gravel in 1899, was surfaced this year. There were 6,184.87 feet built, or 10,308 square yards, costing \$2,991.08, and using 2,021 tons of broken stone. This gives a thoroughly reliable road at the rate of \$2,555 per mile, or about \$1,900 per mile less than would have been the case if the stone had been spread on the loose gravel.

The East Pittsfield road, built of a poor grade of gravel in 1897, has been surfaced with broken stone, as was the intention when the road was constructed. The gravel road has not been satisfactory at any time. The traffic is heavy, the cost of maintenance was great and the surface was much worn. There were 6,733 square yards covered, at a cost of \$4,102.49. The cost of placing the stone was about \$500 less than it would have been if spread on the loose gravel, and five years' wear has been saved.

#### CULVERTS AND BRIDGES.

Most of the culverts and short bridges built during the past year have been of reinforced concrete. With the added experience of another year, the men have become more expert, and the annoyances of inspection, so conspicuous in building rubble masonry, have disappeared.

The structures present a neater appearance, are fully as strong and cost less than those of masonry.

Reinforced concrete bridges were built as follows: one 18-foot span in Orange, one 15-foot span in Rehoboth, one  $12\frac{1}{2}$ -foot span and one  $16\frac{1}{2}$ -foot span in Dartmouth. One reinforced concrete arch of 79-foot span was built in Williamstown. One steel girder bridge, with plank floor, of 40-foot span, was built in Buckland.

Bridges with steel I-beams and concrete arches were built as follows: one of 31.93-foot span in Buckland, one of 26-foot span over the Shawsheen River in Bedford, one of 10-foot span in Richmond.

In addition to the above, an abutment of concrete topped out with coursed masonry was built at the Bedford end of the new steel truss bridge, with plank floor and a span of 136.6 feet, built by the county and town, over the Concord River, on the Carlisle road.

The reinforced concrete arch bridge, begun at Essex last year, is finished.

#### MAINTENANCE.

The law of 1900 requires a payment to the Commonwealth by each municipality in which State roads are built of the cost of maintenance of such roads, but not exceeding \$50 for each mile of State road in the respective municipalities. The total cost of repairs was \$55,082.53 in 1903. There will be paid back into the State treasury the sum of \$18,750.71, or about 34.04 per cent. of the total cost.

The same general scheme of repairs as reported for previous years has been continued during the present year. As the State roads are increased to such a length as to make it economical, the maintenance is let out to contract. This is by far the cheapest way of conducting the work. One of the commissioners or an engineer looks over all the roads at short intervals of time, and such close inspection as is made insures good, honest care by the contractor. Eight contracts of this kind are now in operation, covering 64.17 miles. Where no contract exists, the repairs are made under the direction of a division engineer, either by day work or at a stipulated unit price. Parts of the macadam roads in Charlemont, North-

ampton, Deerfield, Buckland, Phillipston, Westport, Fairhaven, Mattapoisett, Leicester, Spencer, Andover, Methuen, Russell, Huntington, Worcester and Paxton were thoroughly resurfaced and repaired during the current year. The length thus repaired was 12.7 miles. At various points on the Andover, Leicester, Charlemont and Shrewsbury roads the frost action was such as to cause blow-holes or ruts. These weak places were removed by building side drains just outside the edge of the macadam, or by stripping off the macadam surfacing, removing clayey soil from the sub-grade, placing "V" drains and replacing the old broken stone. There were 3,096 feet of side drains put in at a cost of \$766.18, and 698 feet of "V" drain at a cost of \$506.03.

This work might well have been done when the roads were built, but the treacherous character of the soil in these spots was not easily discoverable at that time. In the opinion of the commission, it is more economical to take the chances on certain doubtful soils, remedying the defects which may develop later, and by so doing save useless work.

The resurfacing of these roads was made necessary by the wearing away of the broken stone under the traffic. The amount of this wear is dependent upon the quality of stone and the character of the traffic. Trap rock is used for resurfacing in all cases where its cost is not too great, and it was used on these roads except in Phillipston, Fairhaven and Mattapoisett. A table showing the location of the roads and other information relative to the road building is herewith submitted. Especial attention is called to the two columns indicating the amount of broken stone per square yard per year, and the cost per square yard per year. Information on this point is interesting, inasmuch as it is a measure of the cost.

TABLE SHOWING EXTRAORDINARY REPAIRS ON MASSACHUSETTS STATE ROADS DURING 1903.

TOWN OR CITY.	Length (feet).	Width (feet).	Square Yards.	Tons of Stone.	Broken Stone per Square Yard per Year (Tons).	Cost.				Kind of Stone used.
						Totals.	Per Square Yard.	Per Square Yard per Year.	Broken Stone in Place, per Ton.	
Charlemont,	2,530	$\left\{ \begin{smallmatrix} 15 \\ 18 \\ 21 \end{smallmatrix} \right\}$	4,450	1,216	.0570	\$2,455 64	\$0 552	Cents. 11.600	\$2 02	Trap.
Deerfield,	2,700	15	4,500	1,401	.0390	2,525 52	561	7.010	1 80	Trap.
Northampton,	3 000	20	6,667	825	.0157	1,532 75	230	2.870	1 86	Trap.
Buckland,	796	18	1,592	216	.0140	511 81	321	3.250	2 37	Trap.
Phillipston,	6,400	15	10,667	311	.0290	465 54	043	0.970	1 50	Local.
Westport,	1,600	18	2,667	609	.0290	1,577 22	590	7.390	2 59	Trap.
Fairhaven,	2,700	15	4,500	879	.0240	1,339 55	298	3.720	1 52	Local.
Mattapoisett,	2,300	15	3,833	738	.0240	930 45	243	3.030	1 26	Local.
Leicester,	2,192	15	3,653	797	.0730	1,316 44	360	12.012	1 65	Trap.
Spencer,	2,050	15	3,417	745	.0540	1,225 79	359	8.968	1 65	Trap.
Andover,	3,030	15	5,398	1,000	.0310	1,945 37	360	6.007	1 95	Trap.
Methuen,	5,250	$\left\{ \begin{smallmatrix} 15 \\ 18 \end{smallmatrix} \right\}$	9,617	1,620	.0290	3,369 07	353	5.839	2 02	Trap.
Russell,	2,382	15	3,923	1,050	.0330	1,836 49	468	5.848	1 75	Trap.
Huntington,	4,913	15	8,112	1,504	.0270	2,693 53	332	4.904	1 79	Trap.
Paxton,	17,125	15	28,541	2,172	.0120	4,233 23	148	2.411	1 95	Trap.
Worcester,	7,157	15	11,929	1,638	.0240	3,021 34	253	4.412	1 84	Trap.
	12.70*	—	113,466	16,721	.0322	\$30,979 74†	\$0 273	5.640	\$1 845	

† Per mile, \$2,439.32.

\* Miles.

All of the repairs here indicated are of roads built upon natural soil. It is possible that some of the broken stone settles into the sub-grade under frost action during successive years. This is believed to be true in certain instances. Hence the cost per square yard per year and wear per square yard per year as given may not be correct measures. Their correctness can only be determined by future resurfacing.

A still further analysis is made to show the wear of a macadam road in inches per year. The following table will show this wear in two ways: first, the depth of wear of loose stone: and, second, the depth of wear of the finished road.

TABLE SHOWING THE WEAR OF BROKEN STONE ROADS, IN INCHES.

TOWN OR CITY.	Depth of Wear per Yard per Year of Loose Stone (Inches).	Depth of Wear per Yard per Year of Compacted Road (Inches).	Kind of Stone in Original Road.	Character of Traffic.
Charlemont, .	1.64	1.09	Trap.	Heavy; ten-ton loads.
Deerfield, .	1.12	.75	Trap.	Medium.
Northampton, .	.46	.31	Local.	Medium to large.
Buckland, .	.40	.27	Trap.	Medium.
Phillipston, .	.84	.56	Local.	Light.
Westport, .	.84	.56	Local.	Heavy; five to six ton loads.
Fairhaven, .	.69	.46	Local.	Medium.
Mattapoissett, .	.69	.46	Local.	Medium.
Leicester, .	2.10	1.40	Local.	Heavy to large.
Spencer, .	1.56	1.04	Local.	Heavy to large.
Andover, .	.89	.60	Trap.	Medium.
Methuen, .	.84	.56	Local.	Medium.
Russell, .	.95	.63	Trap.	Heavy; seven-ton loads.
Huntington, .	.78	.52	Trap.	Heavy; seven-ton loads.
Paxton, .	.35	.23	Local.	Medium.
Worcester, .	.69	.46	Local.	Medium.

The depth of wear as given is distributed over the entire width of the macadam, although on many of the roads repaired only 9 or 10 feet of the original width of 15 feet required new stone. It therefore follows that the centre wear would be much greater than is shown in this table, but the work done was supposed to restore the road to its original crown and thickness.

In preparing this table 1 ton is assumed to be .8 of a cubic yard, and the loose broken stone is estimated to be reduced in



thickness one-third by rolling. These figures are found to be correct in Massachusetts work.

It will be noted that the cost of broken stone in these repairs varies from \$1.26 to \$2.02 per ton, which price is for the stone in the finished roadway.

The Highway Commission has, from year to year, in its reports tried to impress upon the Legislature the importance of properly maintaining the roads after they are built. It would be a useless waste of the State's money, if the necessary funds for repair are not furnished. The Legislature of 1903 placed the building of State roads on a permanent basis, but failed to give the same consideration to their maintenance.

The commission would recommend that there shall be appropriated each year out of the treasury of the Commonwealth such sums as the Legislature may determine to be necessary for the proper maintenance of the State highways, subject to the provisions and limitations of section 16 of chapter 47 of the Revised Laws.

The commission would also recommend that the sum of \$50,000 be appropriated for this purpose for the year 1904.

### "SMALL TOWN" WORK.

Under the provisions of chapter 432 of the Acts of 1900 and of chapter 433 of the Acts of 1901, there have been filed with the commission 255 petitions from 101 towns, and 170 allotments have been made in 84 towns.

The provisions of these acts are wise. Under them the heavy hills are being cut to reasonably easy grades, the wet places are either filled with good material or are properly drained, and the general value of the roads is increased.

The interesting feature of this work is the beneficial effect it has upon the town officials. With the small local appropriations for road repairs in any of these towns, there is but little opportunity for the road officers to experiment. The methods of past generations are generally followed, and ordinarily no permanent work results. The road machine moves the worn-out material from the sides to the centre of the road, where it remains for a short time only, as the wheels stir it up and the rain moves it back to the gutters. The gutters which

should exist along the roads have gradually filled up to a level with the roadway, and the rain water, instead of flowing freely and quickly to the natural water courses, filters slowly into the ground, or in some instances remains in pools until it evaporates.

There is no fault to be found with these men; they are honest and earnest, but they cannot learn from experience on account of the meagreness of the appropriations, and their home work is such that time cannot be spared for trips of observation.

The work done by the State in these towns is carefully planned by trained men, — men who have not only laid out similar work, but who by observation have eliminated weak points. The local road man executes this plan under the direction of these same experts; and under this kindergarten system he is acquiring experience which is later on applied to his own roads.

After four years of trial it can be positively stated that there is a marked improvement of the country roads throughout the Commonwealth, and that this improvement is entirely due to the so-called small town act.

Under the provisions of the law making towns of over a million dollars in valuation contribute an amount equal to that allotted by the commission, the commission has received 19 petitions, and has allotted \$15,642.30 to the towns.

For a detailed statement, showing the amounts of the several allotments, the lengths of roads improved and the nature of the work done, see Appendix H.

#### LYNN ROAD.

An appropriation of \$100,000 was made on May 26 last for building a road on the bay side of the Boston, Revere Beach & Lynn Railroad, between the Saugus River and Commercial Street in the city of Lynn.

On account of the great difficulties in the matter of foundation and materials, the contract for grading this work was not signed until November 30. No work has yet been done. The contractor is making arrangements to begin work as soon as the weather is sufficiently settled in the spring, and to finish

before cold weather in the fall. The contract price is \$56,725, and includes the grading and masonry work.

#### STEAM ROAD ROLLERS AND STONE-CRUSHING PLANTS.

The commission has under its control 17 steam rollers and 2 portable stone-crushing plants. These were purchased primarily for the use of small towns which have made appropriations for building roads, but own no road machinery.

The steam rollers were used 945½ days on town work in 32 different towns. All requests for service of this character were granted.

They were also used 394 days on State highway repair work on 33 different roads, 244 days by towns contracting for building State roads, and 194½ days by private contractors on State road contracts. The total number of days' work during the year was 1,778, — an average of 104½ days for each roller.

The same general arrangement for care and maintenance has been followed as was described in the last report of the commission. The total cost of maintenance for the year was \$2,051.39.

In all cases where a State roller was used by a State road contractor a certain charge per day has been made, and the cost for its use was deducted from any money due him under the contract. With the town as contractor a smaller price per ton has been allowed for rolling. No income appears on the books as coming from these sources, but the cost of the roads to the State is reduced by the amounts deducted. The amounts which should be credited to the State on account of roller rentals are as follows : —

State roads, town contracts, . . . . .	\$413 07
State roads, private contracts, . . . . .	898 00
Total, . . . . .	<u>\$1,311 07</u>

Deducting the receipts from the total cost of repairs leaves \$740.32 as the cost of 394 days' rolling on State highway repairs, or an average of \$1.88 per day. Rollers could not be hired for this purpose for less than \$5 per day,

The average cost of maintenance of the rollers was \$1.15 per day.

In the opinion of the commission, the State rollers are an excellent investment. They stimulate good work on town roads, lower the cost of State road repairs, and prevent annoying delays on State road contracts.

One of the portable crushers has been located in the town of Sandisfield, where it has been of good service; the other was used in Carver and Hanson. The stone for 2.06 miles of stone roads was crushed by these machines, — a total of about 5,500 tons.

Nothing was paid out by the State on the crushers, as they were operated and repaired by the towns using them.

#### SURVEYS AND ENGINEERING OFFICE WORK.

During the year surveys for preliminary studies, estimates and lay-outs were made in 57 towns, a total length of 91 miles; and grade stakes for construction work set in 91 towns for a length of 82 miles, part of these being for unfinished work in 1902.

Final surveys were made in 57 towns, a total length of 47 miles. Surveys for "small town" work were made in 14 towns, a total length of 14 miles; and about 7 miles of miscellaneous surveys were made for roads to be constructed by towns.

Plans, profiles and cross-sections were plotted of surveys in 56 towns, representing a length of 88 miles.

Lay-out plans have been made of roads in 85 towns, of a total approximate length of 72 miles. Plans to accompany decrees for street railway locations on State roads, and for provisional locations, have been made in 22 towns. Plans and profiles have been made for work under the "small town" act in 29 towns.

Preliminary estimates in 105 towns, representing 101.5 miles, have been made; and also final estimates in 57 towns, representing 43 miles.

Plans for bridges have been made for all bridges built during the year, with the exception of the Williamstown arch bridge and the superstructure of the Carlisle-Bedford bridge over the Concord River.

## NEW LEGISLATION.

Since the beginning of State road building some towns have emphasized their desire to expedite the work by making appropriations from their own funds to add to allotments of the commission. These subscriptions have been made by the towns of their own free will, and the fact that they have or have not been made has not influenced the commission in its action.

Inasmuch as there is a reasonable doubt as to the strict legality of such proceedings, the commission would recommend that subscriptions of this character be legalized by the passage of the following act:—

AN ACT TO PERMIT CITIES AND TOWNS TO PAY A PORTION OF THE  
EXPENSE OF CONSTRUCTION OF STATE HIGHWAYS WITHIN THEIR  
LIMITS.

*Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:*

SECTION 1. The mayor of a city, if so authorized by a vote of the board of aldermen, or the selectmen of a town, if so authorized by a vote of the town, may agree in writing, in behalf of such city or town, to contribute money, labor or materials toward the cost of any state highway which the Massachusetts highway commission proposes to lay out and construct within the limits of such city or town.

SECTION 2. All agreements or other writings by which heretofore the mayor of a city or the selectmen of a town have agreed, in behalf of such city or town, to contribute money, labor or materials toward the cost of state highways, are hereby ratified and confirmed.

SECTION 3. This act shall take effect upon its passage.

The commission in its reports for the past three years has called attention to an apparent omission in the Revised Laws, chapter 112, section 45. This chapter and section furnish protection to a city, town, railroad or bridge corporation, but fail to include the Commonwealth in this protection.

The commission recommends the passage of the following act:—

AN ACT RELATIVE TO THE LIABILITY OF STREET RAILWAY COMPANIES  
FOR INJURIES ON STATE HIGHWAYS.

*Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows :*

SECTION 1. Section forty-five of chapter one hundred and twelve of the Revised Laws is hereby amended by inserting between the word "against" and the word "a" in the first line the words "the Commonwealth"; and by inserting between the word "the" and the word "city" in the seventh line the word "Commonwealth", so as to read as follows : — "If, upon the trial of an action against the Commonwealth, a city, town, railroad corporation or bridge corporation, the plaintiff recovers damages for an injury to his person or property which was caused by reason of a defect in a street, highway or bridge which is occupied by the tracks of a street railway company, and the street railway company is liable for such damages and has had reasonable notice to defend the action, the Commonwealth, city, town, railroad corporation or bridge corporation may recover the damages, and all the costs of both plaintiff and defendant in the action, from the street railway company."

SECTION 2. This act shall take effect upon its passage.

The takings of land made by the commission are ordinarily narrow strips, small in area, of little value, and distributed over many miles of road. It requires considerable time to secure the names of the record owners and prepare the plans and descriptions defined by section 97 of chapter 48 of the Revised Laws, and in many instances these plans and descriptions have not been filed within the specified sixty days.

There being a possibility that the legality of some of the lay-outs may be affected, the commission recommends the passage of the accompanying act : —

AN ACT RATIFYING THE LOCATIONS OF STATE HIGHWAYS.

*Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows :*

SECTION 1. The location and laying out of all state highways heretofore laid out by the Massachusetts highway commission in behalf of the Commonwealth is hereby legalized, ratified and confirmed, notwithstanding any failure to file a description and plan thereof for record in the registry of deeds for the county or district

in which the land lies, within sixty days after the passage of the order of said commission laying out such highway.

SECTION 2. This act shall take effect upon its passage.

During the past year a justice of one of the district courts of the Commonwealth rendered a decision which apparently affects the legality of many of the lay-outs of State highways made by the commission. The law seemed to be perfectly clear, but a careful study of it, after this decision, shows that a possible error has been made by the filing of a certified copy of the certificate that the road has been laid out, instead of a certificate signed by the commission.

The certificates on the lay-out plans on file in the office of the commission are in all cases properly signed. A certified copy of the certificate, which is a part of this plan, is apparently as effective as a certified copy of the plan itself.

The commission would therefore recommend the passage of the accompanying act:—

AN ACT RELATIVE TO CERTAIN CERTIFICATES FILED BY THE MASSACHUSETTS HIGHWAY COMMISSION IN THE OFFICES OF THE COUNTY COMMISSIONERS OF THE SEVERAL COUNTIES.

*Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:*

SECTION 1. Section six of chapter forty-seven of the Revised Laws is hereby amended by inserting between the word “a” and the word “certificate” in the fourth line the words “certified copy of a”, so that the section shall read as follows:—“If said commission determines that public necessity and convenience require that such way should be laid out or be taken charge of by the Commonwealth, it shall file a certified copy of a plan thereof, a copy of the petition therefor and a certified copy of a certificate that they have laid out and taken charge of said highway in accordance with said plan, in the office of the county commissioners of the county in which the way is situated, and shall file a copy of the plan and location of the portion lying in each city or town in the office of the clerk of said city or town, and thereafter it shall be a state highway, and shall be constructed and kept in good repair and condition by the commission, at the expense of the Commonwealth.”

SECTION 2. The filing of certified copies of such certificates in the offices of the county commissioners heretofore by the Massachusetts

highway commission is hereby ratified and confirmed and made valid to the same extent as if the original certificate had been filed.

SECTION 3. This act shall take effect upon its passage.

#### ENGINEERS AND CLERKS.

The engineering work of the commission during the past year has been under the general direction of Mr. Austin B. Fletcher, secretary of the Board. No chief engineer has been employed. Under the present arrangement much of the work that was formerly done by the chief engineer is now looked after by the different members of the commission. The results are entirely satisfactory.

Messrs. Andrew M. Lovis and Sidney A. Parsons, first and second assistant engineers, respectively, have had charge of the surveying parties and of the office engineering work.

Messrs. William R. Farrington, John A. Johnston, Frank H. Joyner, Franklin C. Pillsbury and Warren B. Wheeler, division engineers, have had charge of construction work in the field.

The following men have been employed as resident engineers of the first class: Messrs. George R. Brown, Albert D. Dadley, Percival H. Everett, Lyman L. Gerry, Albert W. Gray, Howard C. Holden, Charles H. Howes, Everell J. Nichols, Sidney G. Packard, Hiram D. Phillips, Stillman Shaw ( $4\frac{1}{2}$  months), C. Alden Welton, George R. Winslow (9 months).

The following men have been employed as resident engineers of the second class: Messrs. Ernest W. Ayres (7 months), George W. Bagge (10 months), David H. Dickinson (9 months), Stephen Litchfield, Jr. (10 months), Louis T. C. Loring (5 months), Frank H. Morris ( $5\frac{1}{2}$  months), Charles H. Norton ( $9\frac{1}{2}$  months), Carl A. Raymond ( $5\frac{1}{2}$  months), Arthur L. Southworth ( $4\frac{1}{2}$  months), Henry E. Warren (1 month), David H. Winslow (10 months).

The following men have been employed on survey work: chiefs of party: Messrs. Emory N. Colburn, Harold R. Starbird, Fred M. Stuart and George R. Winslow (3 months). Instrumentmen: Messrs. Edward G. Carey ( $1\frac{1}{2}$  months), Martin W. Fisher ( $8\frac{1}{2}$  months), Frank O. Holmes (7 months), Nahum A. Maynard (7 months), George W. Sanborn ( $6\frac{1}{2}$



months) and Charles S. Tinkham (6 months). Rodmen : Messrs. Henry W. Brown (6 months), William G. Burns, John P. Manning ( $1\frac{1}{2}$  months), Samuel McClintock (3 months) and Arthur Weston (8 months).

The following men have been employed as draughtsmen and office assistants : Messrs. C. Ridgley Brown, Fred H. Cunningham, Charles B. Hollis (3 months), Arthur Larrabee, Arthur P. Rice, James H. Taylor, Robert A. Vesper (4 months), William N. Wade and Nathan B. Wilber ( $3\frac{1}{2}$  months).

Under the provisions of chapter 473 of the Acts of 1903, the duty of registering automobiles and other motor vehicles and licensing the operators thereof was placed upon this Board, and it became necessary to organize a separate department, known as the automobile department. This necessitated a slight change in the clerical force of the commission. Mr. Elting J. O'Hara, formerly one of the stenographers of the Board, was placed in charge of the work, under the direction of the secretary. Mr. John J. Marshall has served as assistant to Mr. O'Hara.

On account of the large amount of clerical work involved in registering the motor vehicles and licensing the operators during the months of July, August and September, additional assistants were employed for comparatively short times. The list is as follows : Benjamin Alexander (21 hours), Edward F. Brennan ( $24\frac{1}{2}$  hours), Helen F. Chubbuck (11 days), Elizabeth M. Connell (3 months, 10 days), Mary T. Dwyer (2 months, 11 days), Howard L. Farrington ( $9\frac{3}{4}$  hours), John G. Hourahan ( $14\frac{3}{4}$  hours), Louise A. McGowan (16 days), C. H. Powell ( $19\frac{3}{4}$  hours), Sarah E. Pray (1 month, 23 days), Catherine S. Riley (18 days), Sarah J. N. Talbot (24 days), Earl D. Taylor ( $20\frac{3}{4}$  hours), Florence L. Yerxa (2 months, 20 days).

The regular clerical force remains as last reported, with the exception above stated and the addition of Nellie M. Barlow as stenographer. The list is as follows : John M. McCarthy, assistant to the secretary ; Mary A. Riley and Nellie M. Barlow, stenographers ; Edward A. Austin, accountant ; Alice M. Worthen, copyist ; and Fred Fair, messenger.

George E. Rayner has continued in the employ of the commission as inspector of the road-building machinery.

## AUTOMOBILE REGISTRATION.

Under the provisions of chapter 473 of the Acts of 1903 it became the duty of the Massachusetts Highway Commission to register all automobiles and other motor vehicles in this State, and to license the operators of such machines.

To Jan. 1, 1904, 3,241 automobiles and 502 motor cycles were registered, and 100 manufacturers or dealers received certificates of registration. There were 3,907 ordinary operators and 692 professional chauffeurs licensed.

The receipts for fees were as follows :—

For 3,743 certificates of registration, . . . . .	at \$2 00	\$7,486 00
100 certificates of registration of manufacturers or dealers, . . . . .	at 10 00	1,000 00
3,907 ordinary licenses to operate, . . . . .	at 2 00	7,814 00
692 professional chauffeurs' licenses, . . . . .	at 2 00	1,384 00
Total, . . . . .		<u>\$17,684 00</u>

Under the provisions of this act the secretary has deposited the sum of \$17,688 in the State treasury, and taken proper receipts therefor. The excess of \$4 is due to the fact that two applicants for licenses have not yet perfected their application papers.

## EXPENDITURES.

The following is a summary of the expenditures of the Massachusetts Highway Commission from Dec. 1, 1902, to Nov. 30, 1903 :—

## CONSTRUCTION EXPENDITURES.

TOWN OR CITY.	Year of Lay-out.	Amount.	Totals.
<i>Barnstable County.</i>			
Barnstable, . . . . .	1902	\$348 90	
Bourne, . . . . .	1903	140 35	
Chatham, . . . . .	1902	14 37	
Eastham, . . . . .	1903	1,045 91	
Harwich, . . . . .	1902	518 43	
Harwich, . . . . .	1903	8,460 15	
Orleans, . . . . .	1902	26 20	
Orleans, . . . . .	1903	1,719 07	
<i>Amount carried forward,</i> . . . . .		<u>\$12,273 38</u>	

CONSTRUCTION EXPENDITURES — *Continued.*

TOWN OR CITY.	Year of Lay-out.	Amount.	Totals.
<i>Amount brought forward,</i>		\$12,273 38	
Provincetown, . . . . .	1903	488 23	
Sandwich, . . . . .	1902	526 19	
Wellfleet, . . . . .	1903	2,327 98	\$15,565 78
<i>Berkshire County.</i>			
Becket, . . . . .	1902	\$315 15	
Cheshire, . . . . .	1902	418 22	
Dalton, . . . . .	1903	2,967 72	
Great Barrington, . . . . .	1902	3,905 71	
Hancock (1903 contract), . . . . .	1895	2,478 84	
Hinsdale (bridge), . . . . .	1902	210 97	
Hinsdale, . . . . .	1903	1,472 09	
North Adams, . . . . .	1902	411 17	
North Adams, . . . . .	1903	4,117 72	
Pittsfield (1903 contract), . . . . .	1897	4,623 52	
Pittsfield, . . . . .	1902	4,119 99	
Richmond, . . . . .	1902	307 90	
Richmond, . . . . .	1903	2,621 35	
Williamstown, . . . . .	1898	983 76	
Williamstown (bridge), . . . . .	1903	3,510 30	
Windsor, . . . . .	1902	80 27	
Windsor, . . . . .	1903	1,808 87	34,353 55
<i>Bristol County.</i>			
Attleborough, . . . . .	1903	\$2,456 84	
Dartmouth, . . . . .	1903	389 29	
Dighton, . . . . .	1902	331 68	
Dighton, . . . . .	1903	7,360 24	
Fairhaven, . . . . .	1894	1,548 33	
Freetown, . . . . .	1902	2,575 84	
Freetown, . . . . .	1903	7,025 44	
Raynham, . . . . .	1903	5,809 42	
Rehoboth, . . . . .	1903	3,144 35	
Seekonk, . . . . .	1902	247 65	
Somerset, . . . . .	1903	5,837 79	
Swansea (1st), . . . . .	1903	1,551 82	
Swansea (2d), . . . . .	1903	1,672 76	39,951 45
<i>Dukes County.</i>			
Edgartown, . . . . .	1902	\$884 39	
Edgartown, . . . . .	1903	2,135 89	
West Tisbury, . . . . .	-	43 24	3,063 52
<i>Essex County.</i>			
Amesbury, . . . . .	1903	\$1,979 91	
Andover, . . . . .	1896	2,542 41	
Andover, . . . . .	1902	496 18	
<i>Amounts carried forward,</i>		\$5,018 50	\$92,934 30

CONSTRUCTION EXPENDITURES — *Continued.*

TOWN OR CITY.	Year of Lay-out.	Amount.	Totals.
<i>Amounts brought forward,</i>		\$5,018 50	\$92,934 30
Andover, . . . . .	1903	5,129 28	
Essex, . . . . .	1902-03	9,016 70	
Groveland, . . . . .	1900	285 79	
Groveland, . . . . .	1902	1,225 74	
Groveland, . . . . .	1903	1,835 60	
Hamilton, . . . . .	1900	129 35	
Haverhill, . . . . .	1903	10,538 39	
Lawrence, . . . . .	1896	9 95	
Merrimac, . . . . .	1903	4,264 78	
Methuen, . . . . .	1896	1,172 27	
Methuen, . . . . .	1902	331 67	
North Andover, . . . . .	1902	4,338 25	
Rockport, . . . . .	1902	2,569 80	
Rockport (1903 contract), . . . . .	1902	2,584 77	
Wenham, . . . . .	1903	1,880 64	
West Newbury, . . . . .	1903	4,494 04	
			54,825 52
<i>Franklin County.</i>			
Buckland (bridge abutments), . . . . .	1903	\$5,569 17	
Buckland (bridge superstructure), . . . . .	1903	1,551 83	
Charlemont, . . . . .	1897	924 92	
Charlemont, . . . . .	1899	9 95	
Colrain, . . . . .	1898	138 20	
Deerfield, . . . . .	1895	9 20	
Deerfield, . . . . .	1902	1,264 43	
Deerfield, . . . . .	1903	1,514 83	
Greenfield, . . . . .	1902	532 43	
Greenfield, . . . . .	1903	1,284 50	
Orange, . . . . .	1903	9,250 19	
Sunderland, . . . . .	1903	5,368 66	
Whately, . . . . .	1902	763 05	
Whately, . . . . .	1903	3,442 49	
			31,623 85
<i>Hampden County.</i>			
Agawam, . . . . .	1903	\$6,820 10	
Brimfield, . . . . .	1899	3,635 85	
Brimfield, . . . . .	1901-02	1,749 78	
Chester, . . . . .	1902	648 64	
Chicopee, . . . . .	1902	6,160 81	
Chicopee, . . . . .	1903	30 52	
Monson (bridge), . . . . .	1901	31 29	
Palmer (bridge), . . . . .	1901	142 53	
Wales, . . . . .	1901	1,118 72	
Westfield, . . . . .	1902	303 82	
Wilbraham, . . . . .	1903	9,503 37	
			30,145 43
<i>Amount carried forward,</i>			\$209,529 10

CONSTRUCTION EXPENDITURES — *Continued.*

TOWN OR CITY.	Year of Lay-out.	Amount.	Totals.
<i>Amount brought forward,</i>			\$209,529 10
<i>Hampshire County.</i>			
Amherst, . . . . .	1901	\$11 05	
Amherst, . . . . .	1902	331 68	
Belchertown, . . . . .	1901	688 86	
Granby, . . . . .	1902	1,033 70	
Hadley, . . . . .	1902	704 49	
Hadley, . . . . .	1903	8,470 84	
Hatfield, . . . . .	1901	34 36	
Huntington, . . . . .	1903	1,314 43	
Northampton, . . . . .	1894	1,671 03	
South Hadley, . . . . .	1903	10,126 98	
Ware, . . . . .	1903	4,062 29	
Williamsburg, . . . . .	1903	2,091 11	
			30,540 82
<i>Middlesex County.</i>			
Acton, . . . . .	1902	\$218 43	
Ashland, . . . . .	1903	130 14	
Bedford, . . . . .	1902	2,594 93	
Bedford, . . . . .	-	71 29	
Burlington (1st), . . . . .	1903	5,276 11	
Burlington (2d), . . . . .	1903	5,040 55	
Carlisle, . . . . .	-	71 29	
Chelmsford, . . . . .	1903	4,966 37	
Groton (1902 contract), . . . . .	1902	221 12	
Groton (1903 contract), . . . . .	1902	3,719 17	
Littleton, . . . . .	1902	371 92	
Littleton, . . . . .	1902-03	3,489 70	
Marlborough, . . . . .	1902	4,049 21	
Marlborough, . . . . .	1903	7,278 92	
Natick, . . . . .	1903	178 45	
Reading, . . . . .	1900	61 91	
Reading, . . . . .	1902	6,821 69	
Stoneham, . . . . .	1900	159 21	
Sudbury, . . . . .	1901-02	925 79	
Tewksbury, . . . . .	1902	986 42	
Tewksbury, . . . . .	1903	8,825 72	
Townsend (1903 contract), . . . . .	1902	5,194 15	
Westford, . . . . .	1902	872 42	
			61,524 91
<i>Nantucket County.</i>			
Nantucket, . . . . .	1903	\$57 60	57 60
<i>Norfolk County.</i>			
Braintree, . . . . .	1902	\$2,232 13	
Cohasset, . . . . .	1902	110 56	
Cohasset, . . . . .	1903	1,352 95	
Foxborough, . . . . .	1902	1,725 18	
<i>Amounts carried forward,</i>		\$5,420 82	\$301,652 43

CONSTRUCTION EXPENDITURES — *Continued.*

TOWN OR CITY.	Year of Lay-out.	Amount.	Totals.
<i>Amounts brought forward,</i>		\$5,420 82	\$301,652 43
Holbrook, . . . . .	1902	710 93	
Quincy, . . . . .	1902	106 94	
Randolph, . . . . .	1902-03	9,943 04	
Stoughton, . . . . .	1903	32 26	
Wrentham, . . . . .	1902	22 71	16,236 70
<i>Plymouth County.</i>			
Abington, . . . . .	1903	\$5,179 67	
Duxbury, . . . . .	1903	14 64	
Lakeville, . . . . .	1902	433 44	
Marion (1902 contract), . . . . .	1901	243 16	
Marion, . . . . .	1903	1,298 18	
Marshfield, . . . . .	1902	5,984 05	
Mattapoissett, . . . . .	1894	1,059 72	
Mattapoissett, . . . . .	1903	2,982 48	
Middleborough, . . . . .	1902	3,008 98	
Middleborough, . . . . .	1903	6,618 44	
Plymouth, . . . . .	1902	221 12	
Rockland, . . . . .	1902	5,124 01	
Wareham (1902 contract), . . . . .	1901	364 75	
Wareham, . . . . .	1901	210 12	
West Bridgewater, . . . . .	1901	110 56	
West Bridgewater, . . . . .	1902	747 96	
Whitman, . . . . .	1895	51 52	33,652 80
<i>Worcester County.</i>			
Athol, . . . . .	1895	\$221 12	
Athol, . . . . .	1902	5,432 83	
Athol, . . . . .	1903	3,476 08	
Auburn, . . . . .	1896	716 39	
Barre (bridge), . . . . .	1901	235 06	
Barre, . . . . .	1902	2,838 49	
Blackstone, . . . . .	1902	4,130 42	
Brookfield, . . . . .	1902	561 31	
Brookfield, . . . . .	1903	3,917 30	
Charlton, . . . . .	1901-02	6,137 91	
Douglas, . . . . .	1902	8,333 44	
Dudley, . . . . .	1902	1,074 07	
Fitchburg (1st), . . . . .	1903	5,095 45	
Fitchburg (2d), . . . . .	1903	166 56	
Holden, . . . . .	1897	380 20	
Lancaster, . . . . .	1902	221 12	
Leicester, . . . . .	1899	1,056 39	
Leominster, . . . . .	1901	225 36	
Leominster, . . . . .	1902	324 77	
Lunenburg, . . . . .	1903	6,095 64	
Millbury, . . . . .	1902	612 84	
Millbury, . . . . .	1903	5,714 60	
<i>Amounts carried forward,</i>		\$56,967 35	\$351,541 93

CONSTRUCTION EXPENDITURES— *Concluded.*

TOWN OR CITY.	Year of Lay-out.	Amount.	Totals.
<i>Amounts brought forward, . . . . .</i>		\$56,967 35	\$351,541 93
New Braintree, . . . . .	1903	15 77	
Northborough, . . . . .	1902	221 12	
Paxton, . . . . .	1902	229 41	
Princeton, . . . . .	1902	6,151 43	
Princeton, . . . . .	1903	571 56	
Shrewsbury, . . . . .	1895	149 17	
Shrewsbury, . . . . .	1896	250 96	
Shrewsbury, . . . . .	1897	219 76	
Shrewsbury, . . . . .	1898	147 48	
Southborough, . . . . .	1903	37 22	
Southbridge, . . . . .	1902	1,258 73	
Spencer (1899 contract), . . . . .	1897	1,813 46	
Sutton, . . . . .	1902	1,078 53	
Sutton, . . . . .	1903	1,599 31	
Templeton, . . . . .	1902	222 71	
Templeton, . . . . .	1903	6,408 44	
Uxbridge, . . . . .	1903	4,193 93	
Westminster, . . . . .	1903	6,128 00	
Worcester, . . . . .	1903	6,765 75	
			94,430 09
			\$445,972 02

## REPAIR AND MAINTENANCE EXPENDITURES.

[From loan fund and under chapter 280 of the Acts of 1903.]

TOWN OR CITY.	Paid from Loan Fund.	Paid from Revenue.	Amount.	Totals.
<i>Barnstable County.</i>				
Barnstable, . . . . .	\$136 30	\$118 71	\$255 01	
Bourne, . . . . .	18 08	4 01	22 09	
Brewster, . . . . .	272 19	220 26	492 45	
Chatham, . . . . .	180 04	34 63	214 67	
Dennis, . . . . .	203 52	187 85	391 37	
Eastham, . . . . .	1 39	43 22	44 61	
Harwich, . . . . .	146 59	73 16	219 75	
Orleans, . . . . .	41 34	28 52	69 86	
Provincetown, . . . . .	6 09	15 01	21 10	
Sandwich, . . . . .	88 03	58 39	146 42	
Truro, . . . . .	227 61	41 66	269 27	
Wellfleet, . . . . .	3 07	39 94	43 01	
Yarmouth (north), . . . . .	117 76	127 34	245 10	
Yarmouth (south), . . . . .	205 91	177 69	383 60	
	\$1,647 92	\$1,170 39	\$2,818 31	\$2,818 31
<i>Am't carried for'd, . . . . .</i>				\$2,818 31

REPAIR AND MAINTENANCE EXPENDITURES — *Continued.*

TOWN OR CITY.	Paid from Loan Fund.	Paid from Revenue.	Amount.	Totals.
<i>Am't brought for'd, . . . . .</i>				\$2,818 31
<i>Berkshire County.</i>				
Adams, . . . . .	\$1 00	\$12 28	\$13 28	
Becket, . . . . .	7 54	5 79	13 33	
Cheshire, . . . . .	108 05	96 42	204 47	
Dalton, . . . . .	162 78	226 04	388 82	
Great Barrington, . . . . .	286 71	974 42	1,261 13	
Hancock, . . . . .	277 45	375 90	653 35	
Hinsdale, . . . . .	1 20	36 07	37 27	
Lee, . . . . .	726 26	543 87	1,270 13	
Lenox, . . . . .	140 77	253 77	394 54	
North Adams, . . . . .	255 97	632 76	888 73	
Pittsfield, . . . . .	231 54	342 46	574 00	
Richmond, . . . . .	143 90	101 37	245 27	
Williamstown, . . . . .	127 67	284 76	412 43	
Windsor, . . . . .	1 17	141 28	142 45	
	\$2,472 01	\$4,027 19	\$6,499 20	6,499 20
<i>Bristol County.</i>				
Acushnet, . . . . .	\$122 60	\$18 73	\$141 33	
Attleborough, . . . . .	112 17	98 85	211 02	
Dartmouth, . . . . .	25 10	7 61	32 71	
Dighton, . . . . .	2 75	10 44	13 19	
Easton, . . . . .	21 39	22 24	43 63	
Fairhaven, . . . . .	78 22	6 64	84 86	
Freetown, . . . . .	70 85	3 95	74 80	
Mansfield, . . . . .	1 27	2 05	3 32	
North Attleborough, . . . . .	42 27	70 73	113 00	
Raynham, . . . . .	7 35	4 20	11 55	
Rehoboth, . . . . .	3 34	75 06	78 40	
Seekonk, . . . . .	6 61	25 94	32 55	
Somerset, . . . . .	136 53	35 12	171 65	
Swansea, . . . . .	1 43	2 31	3 74	
Taunton, . . . . .	17 41	77 74	95 15	
Westport, . . . . .	1,734 99	199 16	1,934 15	
	\$2,384 28	\$660 77	\$3,045 05	3,045 05
<i>Dukes County.</i>				
Cottage City, . . . . .	\$63 96	\$56 14	\$120 10	
Edgartown, . . . . .	47 24	38 50	85 74	
Tisbury, . . . . .	51 63	45 67	97 30	
West Tisbury, . . . . .	75 99	67 21	143 20	
	\$238 82	\$207 52	\$446 34	446 34
<i>Essex County.</i>				
Amesbury, . . . . .	\$35 54	\$35 60	\$71 14	
Andover, . . . . .	74 14	99 95	174 09	
Beverly, . . . . .	1,498 27	5 71	1,503 98	
Essex, . . . . .	61	2 43	3 04	
<i>Am'ts carried for'd, . . . . .</i>	\$1,608 56	\$143 69	\$1,752 25	\$12,808 90



REPAIR AND MAINTENANCE EXPENDITURES— *Continued.*

TOWN OR CITY.	Paid from Loan Fund.	Paid from Revenue.	Amount.	Totals.
<i>Am'ts brought for'd, .</i>	\$1,608 56	\$143 69	\$1,752 25	\$12,808 90
Gloucester, . . .	141 14	99 75	240 89	
Groveland, . . .	14 91	41 40	56 31	
Hamilton, . . .	2 54	54 63	57 17	
Haverhill, . . .	157 24	400 66	557 90	
Lawrence, . . .	17 89	53 02	70 91	
Merrimac, . . .	21 48	68 78	90 26	
Methuen, . . .	74 49	2,343 65	2,418 14	
Newbury, . . .	23 81	36 14	59 95	
Newburyport, . . .	33 51	91 68	125 19	
North Andover, . . .	174 27	30 56	204 83	
Rockport, . . .	12 07	23 01	35 08	
Salem, . . .	23	36	59	
Saugus, . . .	99 12	63 57	162 69	
Swampscott, . . .	25 93	454 23	480 16	
Wenham, . . .	46 15	14 21	60 36	
West Newbury, . . .	146 22	815 51	961 73	
	\$2,599 56	\$4,734 85	\$7,334 41	7,334 41
<i>Franklin County.</i>				
Ashfield, . . .	\$65 37	\$67 55	\$132 92	
Buckland, . . .	203 34	660 75	864 09	
Charlemont, . . .	9 71	2,351 27	2,360 98	
Colrain, . . .	65 39	54 85	120 24	
Deerfield, . . .	269 64	995 34	1,264 98	
Erving, . . .	244 21	160 50	404 71	
Greenfield, . . .	35 79	35 92	71 71	
Montague, . . .	50 31	22 06	72 37	
Northfield, . . .	5 77	192 10	197 87	
Orange, . . .	183 65	40 58	224 23	
Shelburne, . . .	218 17	117 94	336 11	
Sunderland, . . .	93	4 85	5 78	
Whately, . . .	25 02	54 48	79 50	
	\$1,377 30	\$4,758 19	\$6,135 49	6,135 49
<i>Hampden County.</i>				
Agawam, . . .	\$1 22	\$1 97	\$3 19	
Brimfield, . . .	79 95	355 79	435 74	
Chester, . . .	74 43	366 44	440 87	
Chicopee, . . .	71 93	173 50	245 43	
Monson, . . .	16 22	42 85	59 07	
Palmer, . . .	45 68	108 97	154 65	
Russell, . . .	290 86	3,298 56	3,589 42	
Wales, . . .	12 44	39 90	52 34	
Westfield, . . .	242 46	207 61	450 07	
West Springfield, . . .	40 43	39 74	80 17	
Wilbraham, . . .	37 59	93 15	130 74	
	\$913 21	\$4,728 48	\$5,641 69	5,641 69
<i>Am't carried for'd, . . .</i>				\$31,920 49

REPAIR AND MAINTENANCE EXPENDITURES — *Continued.*

TOWN OR CITY.	Paid from Loan Fund.	Paid from Revenue.	Amount.	Totals.
<i>Am't brought for'd,</i>	.	.	.	\$31,920 49
<i>Hampshire County.</i>				
Amherst, . . . .	\$9 07	\$36 53	\$45 60	
Belchertown, . . .	2 42	60 78	63 20	
Easthampton, . . .	215 11	15 67	230 78	
Goshen, . . . .	45 66	70 51	116 17	
Granby, . . . .	222 46	123 77	346 23	
Hadley, . . . .	63 89	422 68	486 57	
Hatfield, . . . .	69	59 72	60 41	
Huntington, . . . .	36 79	2,385 21	2,422 00	
Northampton, . . .	184 23	207 42	391 65	
South Hadley, . . .	101 36	787 17	888 53	
Ware, . . . .	4 02	221 10	225 12	
Williamsburg, . . .	28 53	82 74	111 27	
	\$914 23	\$4,473 30	\$5,387 53	5,387 53
<i>Middlesex County.</i>				
Acton, . . . .	\$76 10	\$65 85	\$141 95	
Ashby, . . . .	6 13	284 13	290 26	
Bedford, . . . .	96	1 53	2 49	
Boxborough, . . . .	6 32	5 77	12 09	
Burlington, . . . .	1 74	46 58	48 32	
Chelmsford, . . . .	3 54	52 43	55 97	
Concord, . . . .	92 36	5 66	98 02	
Groton, . . . .	18 54	107 50	126 04	
Lexington, . . . .	128 96	11 84	140 80	
Lincoln, . . . .	52 37	5 86	58 23	
Littleton, . . . .	3 80	26 62	30 42	
Lowell (north), . . .	19 22	19 25	38 47	
Lowell (south), . . .	6 03	52 54	58 57	
Marlborough, . . . .	39 51	22 37	61 88	
Natick, . . . .	1 98	7 71	9 69	
Newton, . . . .	1 82	7 10	8 92	
North Reading, . . . .	3 10	24 89	27 99	
Reading, . . . .	30 06	78 71	108 77	
Stoneham, . . . .	33 05	92 14	125 19	
Sudbury, . . . .	54 93	111 26	166 19	
Tewksbury, . . . .	42 17	67 44	109 61	
Townsend, . . . .	15 00	216 14	231 14	
Tyngsborough, . . . .	23 42	27 31	50 73	
Watertown, . . . .	7 50	303 28	310 78	
Wayland, . . . .	147 47	6 45	153 92	
Westford, . . . .	4 32	38 46	42 78	
Weston, . . . .	180 65	25 41	206 06	
Winchester, . . . .	105 78	112 31	218 09	
Woburn, . . . .	94 51	124 37	218 88	
	\$1,201 34	\$1,950 91	\$3,152 25	3,152 25
<i>Am't carried for'd,</i>	.	.	.	\$40,460 27

REPAIR AND MAINTENANCE EXPENDITURES — *Continued.*

TOWN OR CITY.	Paid from Loan Fund.	Paid from Revenue.	Amount.	Totals.
<i>Am't brought for'd,</i>	.	.	.	\$40,460 27
<i>Nantucket County.</i>				
Nantucket,	\$195 97	\$162 81	\$358 78	358 78
<i>Norfolk County.</i>				
Bellingham,	\$0 67	\$2 61	\$3 28	
Braintree,	1 87	3 01	4 88	
Cohasset,	34 33	6 49	40 82	
Foxborough,	3 20	8 99	12 19	
Holbrook,	100 26	44 61	144 87	
Milton,	159 76	217 58	377 34	
Norfolk,	9 51	4 12	13 63	
Norwood,	36 00	56 08	92 08	
Quincy,	1 87	58 39	60 26	
Randolph,	2 43	104 92	107 35	
Stoughton,	1 33	22 13	23 46	
Walpole,	21 59	38 90	60 49	
Wellesley,	2 02	8 01	10 03	
Westwood,	8 85	2 98	11 83	
Weymouth,	26 64	11 91	38 55	
Wrentham,	59 89	50 92	110 81	
	\$470 22	\$641 65	\$1,111 87	1,111 87
<i>Plymouth County.</i>				
Abington,	\$32 56	\$34 41	\$66 97	
Brockton,	69 29	70 41	139 70	
Duxbury,	57 83	137 16	194 99	
Hingham,	118 18	7 54	125 72	
Lakeville,	108 03	55 15	163 18	
Marion,	15 79	25 81	41 60	
Marshfield,	68 19	149 29	217 48	
Mattapoisett,	74 43	19 63	94 06	
Middleborough,	14 95	148 81	163 76	
Plymouth,	40 83	105 22	146 05	
Scituate,	84 41	9 52	93 93	
Wareham,	9 26	112 42	121 68	
West Bridgewater,	71 09	104 43	175 52	
Whitman,	75 79	47 31	123 10	
	\$840 63	\$1,027 11	\$1,867 74	1,867 74
<i>Suffolk County.</i>				
Revere (east),	\$66 92	\$39 05	\$105 97	
Revere (west),	67 49	72 91	140 40	
	\$134 41	\$111 96	\$246 37	246 37
<i>Worcester County.</i>				
Athol,	\$3 92	\$182 93	\$186 85	
Auburn,	199 23	170 05	369 28	
Barre,	158 51	36 06	194 57	
Blackstone,	13 07	57 12	70 19	
<i>Am'ts carried for'd,</i>	\$374 73	\$446 16	\$820 89	\$44,045 03

REPAIR AND MAINTENANCE EXPENDITURES — *Concluded.*

TOWN OR CITY.	Paid from Loan Fund.	Paid from Revenue.	Amount.	Totals.
<i>Am'ts brought for'd, .</i>	\$374 73	\$146 16	\$820 89	\$44,045 03
Brookfield, . . . .	13 47	34 38	47 85	
Charlton, . . . .	3 37	13 15	16 52	
Douglas, . . . .	1 64	106 51	108 15	
Dudley, . . . .	1 04	137 52	138 56	
Fitchburg, . . . .	48 54	178 42	226 96	
Gardner, . . . .	241 18	128 00	369 18	
Grafton, . . . .	16 77	111 81	128 58	
Hardwick, . . . .	1 44	136 78	138 22	
Harvard, . . . .	11 12	19 93	31 05	
Holden, . . . .	6 47	410 28	416 75	
Lancaster, . . . .	2 20	38 08	40 28	
Leicester, . . . .	53 22	284 74	337 96	
Leominster, . . . .	58 62	110 96	169 58	
Lunenburg, . . . .	4 80	125 77	130 57	
Millbury, . . . .	1 57	51 17	52 74	
New Braintree, . . . .	31	16 90	17 21	
Northborough, . . . .	17 90	29 32	47 22	
Paxton, . . . .	1,503 88	178 42	1,682 30	
Phillipston, . . . .	96 47	531 83	628 30	
Princeton, . . . .	185 70	61 07	246 77	
Shrewsbury, . . . .	50 08	278 47	328 55	
Southbridge, . . . .	1 61	6 25	7 86	
Spencer, . . . .	2 82	60 06	62 88	
Sterling, . . . .	137 98	22 61	160 59	
Sturbridge, . . . .	1 03	48 72	49 75	
Sutton, . . . .	47 02	158 93	205 95	
Templeton, . . . .	80 12	13 18	93 30	
Uxbridge, . . . .	22 34	37 94	60 28	
Warren, . . . .	124 60	179 17	303 77	
Westborough, . . . .	26 43	37 86	64 29	
West Boylston, . . . .	12 21	192 13	204 34	
West Brookfield, . . . .	56 25	39 29	95 54	
Westminster, . . . .	85 01	274 57	359 58	
Worcester, . . . .	3,087 76	157 42	3,245 18	
	\$6,379 70	\$4,657 80	\$11,037 50	11,037 50
Totals, . . . .	\$21,769 60	\$33,312 93	—	\$55,082 53

## EXPENDITURES UNDER "SMALL TOWN" ACTS.

[Chapter 47, Revised Laws.]

Alford, . . . . .	\$168 00
Berlin, . . . . .	584 00
Bernardston, . . . . .	272 00
Blandford, . . . . .	840 00
<i>Amount carried forward, . . . . .</i>	\$1,864 00

<i>Amount brought forward,</i>	\$1,864 00
Billerica,	1,500 00
Carver (on two contracts),	1,896 00
Cummington,	480 00
Dana (on two contracts),	266 05
East Bridgewater (on two contracts),	660 00
Florida (on two contracts),	916 00
Granville,	54 61
Hanson,	1,100 00
Heath,	375 00
Lanesborough,	472 00
Leverett (on two contracts),	1,056 00
Leyden,	432 00
Maynard (on two contracts),	2,144 00
Medway,	980 00
Monterey,	348 00
Montgomery,	400 00
New Salem,	924 00
Norwell,	1,000 00
Oakham,	456 00
Otis,	456 00
Pelham,	772 00
Pembroke (on two contracts),	816 00
Peru,	264 00
Plainfield,	340 00
Plympton,	360 00
Rochester,	1,500 00
Rowe,	416 00
Salisbury,	144 20
Sandisfield,	640 00
Savoy,	592 00
Shirley,	1,138 00
Tolland,	393 00
Topsfield,	1,100 00
Washington,	512 00
Wendell,	174 00
West Stockbridge,	642 00
Worthington,	718 00
Total,	\$28,300 86

## EXPENDITURES UNDER SECTION 38, CHAPTER 112, REVISED LAWS.

Cheshire, Hoosac Valley Street Railway Company, \$1,917 59

## EXPENDITURES UNDER CHAPTER 473, ACTS OF 1903.

*Automobile Registration.*

Salaries of clerks and clerical assistants, . . . . .	\$1,662 08
Travel and expenses, . . . . .	274 63
Number plates for registering automobiles, . . . . .	1,851 57
Badges for professional chauffeurs, . . . . .	199 50
Typewriter and office supplies, . . . . .	157 90
Printing, including postal cards and envelopes, . . . . .	971 70
Rent, . . . . .	30 00
Miscellaneous items, including express charges, telegrams, fares, due stamps and other minor items, . . . . .	28 65
Total expenditures, . . . . .	<hr/> \$5,176 03

## GENERAL OFFICE EXPENSES.

*For Month of December, 1902.*

[Under Acts of 1902, Chapter 67.]

Salaries of commissioners, . . . . .	\$708 35
Travel of commissioners, . . . . .	125 93
Salaries of clerical assistants and first and second assistant engineers, . . . . .	1,049 00
Printing, including postal cards and envelopes, . . . . .	61 11
Rent of offices, . . . . .	989 58
Advertising hearings, . . . . .	9 60
Office supplies, . . . . .	17 56
Telephone, including tolls, . . . . .	4 21
Postage, . . . . .	12 21
Recording land takings and easements, . . . . .	47 84
Repairs to steam road rollers, . . . . .	43 49
Miscellaneous items, including express charges, telegrams, car fares and minor office expenses, . . . . .	29 76
	<hr/> \$3,098 64

*Jan. 1 to Nov. 30, 1903.*

[Under Acts of 1903, Chapter 14.]

Salaries of commissioners, . . . . .	\$7,791 65
Travel of commissioners, . . . . .	2,446 90
Salaries of clerical assistants and first and second assistant engineers, . . . . .	11,707 51
Rent of offices, . . . . .	3,760 42
Printing and binding annual report, . . . . .	984 64
Printing, including postal cards and envelopes, . . . . .	1,113 90
Office supplies, . . . . .	347 47
Telephone, including tolls, . . . . .	277 03
Postage, . . . . .	140 56

*Amount carried forward, . . . . .* 

---

\$28,570 08

<i>Amount brought forward,</i>	\$28,570 08
Recording land takings and easements,	94 44
Advertising hearings,	46 32
Repairs to steam road rollers,	1,107 87
Miscellaneous items, including express charges, telegrams, car fares and minor office expenses,	282 05
	<hr/>
	\$30,100 76

## SUMMARY OF EXPENDITURES.

For construction,	\$445,972 02
For construction under "small town" acts,	28,300 86
For road repair and maintenance,	55,082 53
For expenditures under chapter 112 of Revised Laws,	1,917 59
For expenditures for automobile registration,	5,176 03
For general office accounts,	33,199 40
	<hr/>
	\$569,648 43

W. E. McCLINTOCK,  
 HAROLD PARKER,  
 JOHN H. MANNING,  
*Massachusetts Highway Commission.*





---

---

## APPENDIX.

---

---

## APPENDIX A.

TABLE SHOWING THE HIGHWAYS LAID OUT OR CON  
OF THE SEVERAL CONSTRUC

[In the last column the capital letters used have the following significance: A, trap; B, local limestone; F, gravel; G, gravel and four-inch macadam; H, screened gravel; K, clay and four-

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Abington, . . . .	1900-01, . . . .	Brockton line, . . . . .
2	Abington, . . . .	1903, . . . . .	Easterly end of 1901 lay-out, . . . .
3	Acton, <sup>2</sup> . . . . .	1899-1900-01-02, . .	Concord line to Littleton line, . . .
4	Acton (west), . . . .	1901, . . . . .	Boxborough line, . . . . .
5	Acushnet, . . . . .	1897, . . . . .	1,500 feet from New Bedford line, . .
6	Acushnet, . . . . .	1901, . . . . .	Long Plain village to Rochester line, .
7	Acushnet, . . . . .	1903, . . . . .	Long Plain village to Rochester line, .
8	Adams, . . . . .	1897, . . . . .	Cheshire line, . . . . .
9	Agawam, . . . . .	1903, . . . . .	South end bridge at Connecticut River,
10	Amesbury, . . . . .	1899-1901, . . . .	Merrimac line, . . . . .
11	Amesbury, . . . . .	1903, . . . . .	Easterly end of 1901 section, . . . .
12	Amherst, . . . . .	1901, . . . . .	Hadley line, . . . . .
13	Andover, . . . . .	1895-6, . . . . .	Lawrence line, . . . . .
14	Andover, . . . . .	1897-9-1900-02, . .	North Reading line, . . . . .
15	Andover, . . . . .	1903, . . . . .	Northerly end of 1901 lay-out, . . . .
16	Ashby, . . . . .	1894-5-6-7-8-9, . .	Ashby post-office, . . . . .
17	Ashfield, . . . . .	1897-8, . . . . .	One mile north of Ashfield post-office,
18	Ashland, . . . . .	1903, . . . . .	Southborough line, . . . . .
19	Athol, . . . . .	1895 6, . . . . .	Orange line, . . . . .
20	Athol, . . . . .	1902, . . . . .	Phillipston line, . . . . .
21	Athol, . . . . .	1903, . . . . .	Westerly end of 1902 lay-out, . . . .
22	Attleborough, . . . .	1900-01, . . . . .	North Attleborough line, . . . . .
23	Attleborough, . . . .	1903, . . . . .	Southerly end of 1901 lay-out, . . . .
24	Auburn, . . . . .	1895-6-7-1901, . .	Dunn's Mills, . . . . .
25	Auburn, . . . . .	1898-9, . . . . .	Worcester line, . . . . .
26	Auburn, . . . . .	1903, . . . . .	South-westerly end of 1901 lay-out, .
27	Barnstable (north), . .	1899-1902, . . . .	Sandwich line, . . . . .

<sup>1</sup> 1900 section.<sup>2</sup> Exclusive of 1,100 feet at railway crossing.

## APPENDIX A.

TRACTED FOR BY THE COMMISSION, AND THE NATURE  
TIONS TO JAN. 1, 1904.

field stone; C, local ledge other than trap; D, bottom course field stone, top course trap; E, inch macadam; M, clay and screened gravel; N, unsurfaced; O, stone from Cohasset quarry.]

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length.		Location.	Macadam.	Shoulders.		
	Miles.	Miles.	Feet.	Feet.	Feet.		
Easterly, . .	1.18	1.18	50-60	15	<sup>1</sup> 3	B.	1
Easterly, . .	.55	.56	50-60	15	-	B.	2
North-westerly, .	3.71	3.71	50-50+	15	<sup>3</sup> 3	A-G.	3
South-easterly, .	.72	.72	50	15	-	A.	4
Northerly, . .	.61	.61	50+	15	3	B.	5
Northerly, . .	1.77	1.77	40	15	-	B.	6
Easterly, . .	1.03	1.03	40	-	-	-	7
Northerly, . .	.57	.57	50	15	3	A.	8
Southerly, . .	.70	.70	50-60+	15	-	A.	9
Easterly, . .	.94	.94	50-55-60	15	<sup>4</sup> 3	B.	10
Easterly, . .	.76	.53	55±	15	-	B.	11
Easterly, . .	.95	.95	50	15	-	A.	12
Southerly, . .	1.22	1.22	66	18	3	D.	13
Northerly, . .	2.33	2.33	60	15	<sup>5</sup> 3	B-C.	14
Northerly, . .	.65	.65	66	15	-	B.	15
Southerly to Fitchburg line.	3.58	3.58	66-50	20-18-15	5-3	B.	16
Northerly, . .	1.61	1.61	50-70	-	-	H.	17
Easterly, . .	1.47	-	50±	-	-	F.	18
Easterly, . .	1.61	1.61	50	17	3	A-D.	19
Westerly, . .	.61	.61	50	15	-	B.	20
Westerly, . .	.88	.41	50	15	-	B.	21
South westerly, .	2.22	2.22	66	-	-	F.	22
South-westerly, .	.44	.44	66	-	-	F.	23
Southerly, . .	2.91	2.91	50+	15	3	'95 A, '96-7 B, 1901 F.	24
Southerly, . .	1.14	1.14	50+	15-18	3	A.	25
South-westerly, .	.45	-	50	-	-	-	26
South-easterly, .	2.14	2.00	40-50	15	-	1899 B, 1902 B-G.	27

<sup>3</sup> 1899-1900 sections.<sup>4</sup> 1899 section.<sup>5</sup> 1897-9-1900 sections.

TABLE SHOWING THE HIGHWAYS LAID OUT OR

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Barnstable (south), . . .	1897-1901, . . .	Yarmouth line, . . . . .
2	Barre, . . . . .	1897-9-1900-02, . . .	Bridge over Ware River to Barre Com- mon.
3	Becket, . . . . .	1902, . . . . .	Chester line, . . . . .
4	Bedford, . . . . .	1897-1902, . . . . .	Lexington line, . . . . .
5	Belchertown, . . . . .	1900-01-02, . . . . .	Near depot, . . . . .
6	Bellingham, . . . . .	1902, . . . . .	900 feet from Blackstone line, . . .
7	Beverly, . . . . .	1895-7-8, . . . . .	Wenham line, . . . . .
8	Blackstone, . . . . .	1899-1900-02, . . . . .	Uxbridge line, . . . . .
9	Bourne, . . . . .	1897-8, . . . . .	Cohasset Narrows, . . . . .
10	Bourne, . . . . .	1903, . . . . .	Back River bridge, . . . . .
11	Boxborough, . . . . .	1897-9, . . . . .	Acton line, . . . . .
12	Braintree, . . . . .	1900-02, . . . . .	Quincy line, . . . . .
13	Brewster, . . . . .	1895-6-7-1901, . . . . .	Dennis line, . . . . .
14	Brimfield, . . . . .	1897-9, . . . . .	Monson line, . . . . .
15	Brimfield, . . . . .	1901-02, . . . . .	Wales line, . . . . .
16	Brockton, . . . . .	1897-8-9, . . . . .	Easton line, . . . . .
17	Brockton, . . . . .	1900, . . . . .	Abington line, . . . . .
18	Brookfield, . . . . .	1897-8-1900, . . . . .	Mill Street, . . . . .
19	Brookfield, . . . . .	1902, . . . . .	West Brookfield line, . . . . .
20	Brookfield, . . . . .	1903, . . . . .	Easterly end of 1902 lay-out, . . .
21	Buckland, . . . . .	1894 to 1900, . . . . .	Shelburne Falls station, . . . . .
22	Buckland, . . . . .	1903, . . . . .	Southerly end of 1900 lay-out, . . .
23	Burlington, . . . . .	1903, . . . . .	Woburn line, . . . . .
24	Charlemont, . . . . .	1897-8-9, . . . . .	Bridge over Deerfield River, . . . .
25	Charlton, . . . . .	1901-02, . . . . .	Charlton Depot to Charlton City, . .
26	Chatham, . . . . .	1899-1901-02, . . . . .	From Depot Street, . . . . .
27	Chelmsford, <sup>1</sup> . . . . .	1898-9-1901, . . . . .	Lowell line, . . . . .
28	Chelmsford, . . . . .	1903, . . . . .	Lowell line, . . . . .
29	Chelsea, . . . . .	1901, . . . . .	Willoughby Street, . . . . .
30	Cheshire, . . . . .	1899-1900-01-02, . . . . .	Farnam's station, Boston & Albany railroad.
31	Chester, . . . . .	1899-1900-01-02, . . . . .	Becket line, . . . . .
32	Chicopee, . . . . .	1897-8-9, . . . . .	Springfield line, . . . . .
33	Chicopee, . . . . .	1902, . . . . .	300 feet from Chicopee River bridge, .
34	Chicopee, . . . . .	1903, . . . . .	Northerly end of 1902 lay-out, . . .
35	Cohasset, . . . . .	1897-9-1900, . . . . .	Near Hingham line, . . . . .
36	Cohasset, . . . . .	1902-03, . . . . .	Beechwood Street to Scituate line, .

<sup>1</sup> 1897 section.<sup>2</sup> 1899 section.<sup>3</sup> 1900 section.

CONTRACTED FOR BY THE COMMISSION, ETC. — *Continued.*

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length.		Location.	Macadam.	Shoulders.		
	Miles.	Miles.	Feet.	Feet.	Feet.		
Westerly, . . .	2.26	2.26	40-62	15-12	-	B.	1
North-westerly, . .	2.89	2.89	49.5-50+	15	-	A, 1902 B.	2
South-westerly, . .	.28	.28	50	12	-	A.	3
North-westerly, . .	1.07	1.07	50-60	15	3	B.	4
Westerly, . . .	1.37	1.37	50	15	-	A-G.	5
North-easterly, . .	.38	.38	50	15	-	B.	6
Southerly, . . .	2.01	2.01	50-60	18	3	'95-'97 A, '98 C.	7
South-easterly, . .	1.74	1.74	49.5-50+	15	3	A-G.	8
Easterly, . . .	1.42	1.42	45+	15	3	B-C.	9
Southerly, . . .	.96	.80	60+	15	-	B-G.	10
Westerly, . . .	1.36	1.36	60-50	15	4-3	B.	11
South-easterly, . .	1.06	1.06	66	18	3	A.	12
To Orleans line, . .	7.79	7.79	40-50-50+	15	3	B.	13
Southerly, . . .	2.34	2.34	60-50	-	-	'97 H, 99 F.	14
Northerly, . . .	1.63	1.63	50	-	-	F.	15
Easterly, . . .	1.87	1.87	33	16	8.5	B.	16
Easterly, . . .	.66	.66	50	15	3	B.	17
Easterly, . . .	1.39	1.39	50	15	3	A.	18
Easterly, . . .	.56	.56	50+	15	-	A.	19
Easterly, . . .	.31	.31	88-100	15	-	A-G.	20
Westerly, . . .	3.50	3.50	50-30	24-18-15-12	3	A-C.	21
South-westerly, . .	.44	-	50	-	-	-	22
Northerly, . . .	1.03	.85	40-50	15	-	B.	23
Easterly, . . .	.77	.77	50-42+	15	3	D.	24
Southerly, . . .	1.91	1.91	50	15	-	B.	25
North-westerly, . .	1.69	1.69	50	15-12	-	A-O.	26
Westerly, . . .	1.44	1.43	50	18-15	3	A.	27
South-westerly, . .	.57	.57	60	18	-	A-O.	28
Southerly, . . .	.58	.58	66	24	-	A.	29
North-easterly, . .	2.60	2.60	50+	15	-	1899-1900 A-G,	30
North-easterly, . .	1.55	1.55	50	15-12	-	1901-2 F. A.	31
Northerly, . . .	.92	.92	50-55-60	20	4-3	A.	32
Northerly, . . .	.67	.67	50+	18	-	A.	33
Northerly, . . .	.37	-	60-84	-	-	-	34
Easterly, . . .	1.73	1.73	50-50+	15	3	B-D.	35
Southerly, . . .	.55	.55	47-60+-70	15	-	C.	36

\* Exclusive of 906 feet at railroad crossing.

TABLE SHOWING THE HIGHWAYS LAID OUT OR

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Colrain, . . . .	1898-1901, . . .	From Shelburne line, . . . .
2	Concord, . . . .	1897-8, . . . .	From Lincoln line, . . . .
3	Concord, . . . .	1900, . . . .	From Acton line, . . . .
4	Cottage City, . . . .	1894-5-6, . . . .	Sengekontacket bridge, . . . .
5	Dalton, . . . .	1895-6, . . . .	Pittsfield line, . . . .
6	Dalton, . . . .	1903, . . . .	Housatonic River bridge, . . . .
7	Dartmouth, . . . .	1898-9-1900-01, . . .	Near Westport line, . . . .
8	Dartmouth, . . . .	1903, . . . .	Easterly end of 1901 lay-out, . . . .
9	Deerfield, . . . .	1894-5, . . . .	South Deerfield station, . . . .
10	Deerfield, . . . .	1900-01-02, . . . .	Cheapside bridge, . . . .
11	Deerfield, . . . .	1903, . . . .	End of 1902 lay-out, . . . .
12	Dennis (north), . . . .	1895-6-7-8, . . . .	Yarmouth line to Brewster line, . . . .
13	Dennis (south), . . . .	1900-01-02, . . . .	Bass River bridge, . . . .
14	Dighton, . . . .	1902, . . . .	Taunton line, . . . .
15	Dighton, . . . .	1903, . . . .	End of 1902 lay-out to Rehoboth line,
16	Douglas, . . . .	1902, . . . .	Sutton line, . . . .
17	Dudley, . . . .	1902, . . . .	1,400 feet from Webster line, . . . .
18	Duxbury, . . . .	1894-5-7-9, . . . .	Marshfield line, . . . .
19	Duxbury, . . . .	1903, . . . .	End of 1899 lay-out, . . . .
20	Eastham, . . . .	1903, . . . .	Wellfleet line, . . . .
21	Easthampton, . . . .	1895-6, . . . .	Northampton line, . . . .
22	Easthampton, . . . .	1900-01, . . . .	Clark Street, . . . .
23	Easton, . . . .	1900, . . . .	Brockton line, . . . .
24	Edgartown, . . . .	1897-9-1900-01-02, . . .	Cottage City line, . . . .
25	Edgartown, . . . .	1903, . . . .	End of 1902 section, . . . .
26	Erving, . . . .	1898-9-1900, . . . .	Town Hall to Orange line, . . . .
27	Essex, . . . .	1902-3, . . . .	Essex River, . . . .
28	Fairhaven, . . . .	1894-5, . . . .	Mattapoisett line, . . . .
29	Fitchburg, . . . .	1894-5, . . . .	Westminster line, . . . .
30	Fitchburg, . . . .	1897, . . . .	Lunenburg line, . . . .
31	Fitchburg, . . . .	1900-01, . . . .	Ashby line, . . . .
32	Fitchburg, . . . .	1903, . . . .	End of 1901 lay-out, . . . .
33	Foxborough, . . . .	1901-02, . . . .	Mansfield line, . . . .
34	Freetown, . . . .	1902, . . . .	New Bedford line, . . . .
35	Freetown, . . . .	1903, . . . .	End of 1902 lay-out to Lakeville line, .
36	Gardner, . . . .	1897-8, . . . .	Templeton line, . . . .

CONTRACTED FOR BY THE COMMISSION, ETC. — *Continued.*

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length		Location.	Macadam.	Shoulders.		
	Miles.	Miles.	Feet.	Feet.	Feet.		
Northerly, . .	1.83	1.83	40-50-50+	-	-	H.	1
Northerly, . .	1.47	1.47	50	15	3	B.	2
South-westerly, .	.52	.52	50	15	3	G-Δ.	3
Northerly, . .	2.37	2.37	50	15	3	B.	4
Easterly, . .	1.56	1.56	30-60	15	3	A.	5
Easterly, . .	.48	.48	57-66	15	-	A.	6
Easterly, . .	2.68	2.68	80	18	-	B.	7
Easterly, . .	.69	-	80±	-	-	-	8
South-easterly, .	1.53	1.53	30	15	3	A.	9
Southerly, . .	1.35	1.35	50	15	-	A.	10
Southerly, . .	.08	.08	50	15	-	A.	11
North-easterly, .	4.27	4.27	40-50-65	15	3	B.	12
Easterly, . .	1.95	1.95	40-45-50	15	-	A-N.	13
South-westerly, .	.59	.59	47.5-66	15	-	B.	14
Easterly, . .	.97	.97	66	15	-	B.	15
South-easterly, .	.93	.93	40+	15	-	B.	16
Westerly, . .	.59	.59	66	15	-	A-G.	17
Southerly, . .	2.05	2.05	30-40-50	15	3	Δ-B-C.	18
Southerly, . .	.79	-	40-50	-	-	A-G.	19
Southerly, . .	.78	.78	40	15	-	K.	20
South-westerly, .	1.32	1.32	40	15	3	A.	21
Southerly, . .	1.10	1.10	49.5	15	3	A.	22
South-westerly, .	.80	.80	70	15	3	B-G.	23
Southerly, . .	2.05	2.05	50	15	3	B.	24
Southerly, . .	.36	.37	66	15	-	B.	25
Easterly, . .	2.04	2.04	50-50+	-	-	F.	26
Easterly and westerly.	.35	.35	36-50	15	-	A.	27
Westerly, . .	1.45	1.45	30	15	3	B.	28
Easterly, . .	.97	.97	50	15	3	A.	29
Westerly, . .	.61	.61	50	18-15	3	D.	30
Southerly, . .	1.07	1.07	50	15	-	B.	31
Southerly, . .	.52	.52	50±	15	-	B.	32
Northerly, . .	1.82	1.82	50	15	-	B-G.	33
North-easterly, .	1.39	1.39	50	15	-	B-G.	34
Northerly, . .	1.80	1.80	50±	15	-	B-G.	35
Easterly, . .	2.37	2.37	50+	15	-	A-G.	36

TABLE SHOWING THE HIGHWAYS LAID OUT OR

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Gardner, . . . .	1900-01, . . . .	Westminster line, . . . . .
2	Gloucester, . . . .	1894-5-8, . . . .	Manchester line, . . . . .
3	Goshen, . . . . .	1894-5, . . . . .	Goshen village to Williamsburg line, .
4	Grafton, . . . . .	1897-9-1900, . . . .	Millbury line, . . . . .
5	Granby, . . . . .	1894-1902, . . . .	South Hadley line, . . . . .
6	Great Barrington, . . . .	1894-6-7, . . . .	Housatonic River, . . . . .
7	Great Barrington, . . . .	1902, . . . . .	End of 1897 lay-out, . . . . .
8	Greenfield, <sup>2</sup> . . . .	1899-1900-02, . . . .	Washington Street, . . . . .
9	Greenfield, . . . . .	1903, . . . . .	Silver Street, . . . . .
10	Groton, . . . . .	1901-02, . . . . .	Near Nashua River at Pepperell line, .
11	Groveland, . . . . .	1900-01-02, . . . .	King Street to West Newbury line, .
12	Hadley, . . . . .	1894-8-9-1900-02, . . . .	Connecticut River bridge, . . . . .
13	Hadley, . . . . .	1903, . . . . .	End of 1902 lay-out, . . . . .
14	Hamilton, . . . . .	1899-1900, . . . .	Ipswich line, . . . . .
15	Hancock, . . . . .	1895-6-8-9, . . . .	Pittsfield line to New York line, . .
16	Hardwick, . . . . .	1897-1901, . . . .	New Braintree line, . . . . .
17	Harvard, . . . . .	1900, . . . . .	Woodchuck Hill, . . . . .
18	Harwich, . . . . .	1899-1900-1-2, . . . .	Dennis line, . . . . .
19	Harwich, . . . . .	1903, . . . . .	End of 1902 lay-out, . . . . .
20	Hatfield, . . . . .	1901, . . . . .	Northampton line, . . . . .
21	Haverhill, . . . . .	1899, . . . . .	West end of River Street, . . . . .
22	Haverhill, . . . . .	1902, . . . . .	Kenoza Road, . . . . .
23	Hingham, . . . . .	1894, . . . . .	Weymouth Back River, . . . . .
24	Hingham, . . . . .	1896-7, . . . . .	Near Cohasset line, . . . . .
25	Hinsdale, . . . . .	1901-02, . . . . .	Dalton line, . . . . .
26	Hinsdale, . . . . .	1903, . . . . .	End of 1902 lay-out, . . . . .
27	Holbrook, . . . . .	1894-6-1902, . . . .	Weymouth line, . . . . .
28	Holden, . . . . .	1894-5-6-7, . . . .	Jefferson village, . . . . .
29	Holden, . . . . .	1898-1900, . . . .	Worcester line, . . . . .
30	Huntington, . . . . .	1895-6, . . . . .	Russell line, . . . . .
31	Huntington, . . . . .	1903, . . . . .	Near railroad crossing, . . . . .
32	Lakeville, . . . . .	1901-02, . . . . .	One-half mile from Middleborough line,
33	Lancaster, . . . . .	1902, . . . . .	Clinton line, . . . . .
34	Lawrence, . . . . .	1896, . . . . .	Methuen line, . . . . .
35	Lee, . . . . .	1894-5-6, . . . . .	Lee Park, . . . . .
36	Lee, . . . . .	1900, . . . . .	Lenox line, . . . . .

<sup>1</sup> 1894 section. <sup>2</sup> Exclusive of 500 feet at Cheapside bridge and 1,100 feet at railroad crossing.



CONTRACTED FOR BY THE COMMISSION, ETC. — *Continued.*

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length		Location.	Macadam.	Shoulders.		
	Miles.	Miles.	Feet.	Feet.	Feet.		
Westerly, . .	.98	.98	60	15	-	A-N.	1
North-easterly, . .	2.48	2.48	50	15	3	C B.	2
South-easterly, . .	1.91	1.91	50	15	3	B.	3
South-easterly, . .	1.56	1.56	50	15	3	G-A-B.	4
North-easterly, . .	1.03	1.01	36 50	15	13	A.	5
Easterly, . .	2.79	2.79	40-50-70	18-15	3	'94 A, '96-'97 F.	6
South-easterly, . .	.62	.62	50	-	-	F.	7
Easterly, . .	1.33	1.33	49.5-50	18-15	33	A.	8
North-easterly, . .	.41	Graded.	50	-	-	A.	9
South-easterly, . .	1.38	1.38	50	15	-	A-G.	10
North-easterly, . .	1.45	1.45	50	15	43	A.	11
Easterly, . .	3.00	3.00	50-82.5-66+	15	3	A.	12
North-easterly, . .	.79	.79	50	15	-	A.	13
South-westerly, . .	1.44	1.44	50-60	15	3	B.	14
Westerly, . .	3.23	3.23	50	5 15	-	C-F.	15
Northerly, . .	.82	.82	50	15	3	A.	16
Westerly, . .	.70	.70	60	15	-	B.	17
Easterly, . .	3.51	3.51	40-40+	15	-	A-O-G.	18
Easterly, . .	1.59	1.59	40+	15	-	A-O-G.	19
North-easterly, . .	.39	.39	50	15	-	A.	20
Westerly, . .	2.08	2.08	70	-	-	F.	21
North-easterly, . .	1.07	.91	50-60	15	-	B.	22
Easterly, . .	1.42	1.42	34	-	-	F.	23
Westerly, . .	1.23	1.23	50-33+	15	3	D.	24
South-easterly, . .	.68	.68	50	15	-	A.	25
Southerly, . .	.33	Graded.	50+	-	-	A.	26
North-westerly, . .	1.75	1.75	50	15	-	B-G.	27
Southerly, . .	2.70	2.70	30-49.5	18-15	3	B.	28
Northerly, . .	1.06	1.06	50	15	3-5	B.	29
Westerly, . .	1.01	1.01	50+	15	3	A.	30
Westerly, . .	.52	.41	50	15	-	A-G.	31
South-westerly, . .	3.57	3.57	50-45	15	-	B-G.	32
Northerly, . .	1.25	.91	49.5	18	-	A.	33
Southerly, . .	.27	.27	50	18	7	C.	34
Easterly, . .	1.98	1.98	35-40-50	24-15	3	D.	35
Southerly, . .	1.26	1.26	50	15	3	D.	36

<sup>3</sup> 1899-1900 section.<sup>4</sup> 1900 section.<sup>5</sup> Portion of 1895 lay-out macadamized.

TABLE SHOWING THE HIGHWAYS LAID OUT OR

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Leicester, <sup>1</sup> . . . .	1894-5-6-8-9, . . .	Worcester line, . . . . .
2	Lenox, . . . . .	1899-1900-01, . . .	Lee line to Lenox village, . . . .
3	Leominster, . . . .	1901-02, . . . . .	Near comb shop to Sterling line, . .
4	Lexington, . . . . .	1895-6-7-8, . . . .	Massachusetts Avenue, . . . . .
5	Lexington, . . . . .	1900, . . . . .	Bedford line, . . . . .
6	Lincoln, . . . . .	1895-6-7, . . . . .	Concord line to Lexington line, . .
7	Littleton, . . . . .	1902, . . . . .	Acton line, . . . . .
8	Littleton, . . . . .	1902, . . . . .	Westford line to Great Road, . . .
9	Littleton, . . . . .	1903, . . . . .	End of 1902 lay-out, . . . . .
10	Lowell (Boulevard), . .	1897, . . . . .	Tyngsborough line, . . . . .
11	Lowell (Princeton Street),	1897-98, . . . . .	Chelmsford line, . . . . .
12	Lunenburg, . . . . .	1898-9-1900-01, . .	Fitchburg line, . . . . .
13	Lunenburg, . . . . .	1903, . . . . .	End of 1901 lay-out, . . . . .
14	Lynn, . . . . .	1899, . . . . .	264 feet north of centre of channel of Saugus River and Revere line.
15	Mansfield, . . . . .	1901, . . . . .	Foxborough line, . . . . .
16	Marion, . . . . .	1894-5-1901, . . . .	Marion village to Wareham line, . .
17	Marion, . . . . .	1897-9-1901-02, . .	Marion village to Mattapoisett, . .
18	Marion, . . . . .	1903, . . . . .	Marion village to Rochester line, . .
19	Marlborough (east), . .	1897, . . . . .	Sudbury line, . . . . .
20	Marlborough (east), . .	1902, . . . . .	Near Hosmer Street, . . . . .
21	Marlborough (east), . .	1903, . . . . .	End of 1902 lay-out, . . . . .
22	Marlborough (west), . .	1897-9-1900-01, . .	Northborough line, . . . . .
23	Marshfield, . . . . .	1894-6-8-9-1901-2, .	Duxbury line, . . . . .
24	Mattapoisett, . . . .	1894-5, . . . . .	Fairhaven line, . . . . .
25	Mattapoisett, . . . .	1900-01, . . . . .	Ned Point Light Road, . . . . .
26	Mattapoisett, . . . .	1903, . . . . .	End of 1901 lay-out to Marion line, .
27	Merrimac, . . . . .	1897-8-9, . . . . .	Near Haverhill line, . . . . .
28	Merrimac, . . . . .	1901, . . . . .	Amesbury line, . . . . .
29	Merrimac, . . . . .	1903, . . . . .	End of 1901 lay-out, . . . . .
30	Methuen, . . . . .	1896-1900-01-02, . .	Lawrence line, . . . . .
31	Middleborough, . . . .	1894-5-6-7-8-1902, .	Nemasket River, . . . . .
32	Middleborough, . . . .	1903, . . . . .	End of 1902 lay-out, . . . . .
33	Millbury, . . . . .	1900, . . . . .	Worcester line, . . . . .
34	Millbury, . . . . .	1903, . . . . .	End of 1900 lay-out, . . . . .
35	Millbury, . . . . .	1902, . . . . .	Grafton line to Worcester line, . .
36	Milton, . . . . .	1899-1900, . . . . .	Neponset River, . . . . .

<sup>1</sup> Exclusive of portion through Leicester village.<sup>2</sup> 1897-9 sections.

CONTRACTED FOR BY THE COMMISSION, ETC. — *Continued.*

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length		Location.	Macadam.	Shoulders.		
	Miles.	Miles.	Feet.	Feet.	Feet.		
Westerly, . .	4.87	4.87	39-53-55-67+	24-18-16-15	3-5-5.5	'94-'96 D, '98- '99 B.	1
Northerly, . .	2.28	2.28	60-66-56±	15	3	D.	2
South-westerly, .	2.18	2.18	50	-	-	F.	3
Westerly, . .	3.45	3.45	50-50+	15	3	B.	4
South-easterly, .	.85	.85	50	15	3	B.	5
North-westerly, .	2.06	2.06	50	15	3	B.	6
Northerly, . .	.50	.48	50	15	-	A-G.	7
South-easterly, .	.32	.32	50	-	-	F.	8
Northerly, . .	.60	.62	50	-	-	F.	9
Easterly, . .	.97	.97	60	15	3	D.	10
Easterly, . .	1.34	1.34	50±	18	6	D.	11
Easterly, . .	1.85	1.85	50	15	3	D.	12
Easterly, . .	.87	.87	50-50+	15	-	B-G.	13
North-easterly, .	.90	-	70	-	-	-	14
South-easterly, .	.72	.72	50	15	-	B-G.	15
North-easterly, .	1.59	1.59	40-50-65	15	3	B.	16
Westerly, . .	1.84	1.84	40-50-55	15	2 3	B.	17
North-westerly, .	2.14	-	40-50	-	-	B.	18
Westerly, . .	.40	.40	50-60	15	3	B.	19
Easterly, . .	.61	.61	40-50	15	-	B.	20
Easterly, . .	1.10	1.10	50	15	-	B.	21
Easterly, . .	2.41	2.41	50-65	15	5-4-3	B.	22
Northerly, . .	3.19	3.19	30-40-45-50	15	3 3	B-C-G.	23
Easterly, . .	1.16	1.16	30	15	3	B.	24
Easterly, . .	1.38	1.38	40-50	15	3	B.	25
Easterly, . .	.66	.66	50-60	15	-	B-G.	26
North-easterly, .	.92	.92	50+	15	4 3	B-C.	27
South-westerly, .	.64	.64	50	15	3	C.	28
Westerly, . .	.56	.56	50-60	15	-	B.	29
North-easterly, .	2.63	2.63	50	15	-	C-B.	30
Southerly, . .	4.26	4.26	30-50	15	4-	B-G.	31
Southerly, . .	4.72	2.75	50	15	-	B-G.	32
Southerly, . .	.38	.38	50	15	3	A.	33
Southerly, . .	.51	.51	50	15	-	A.	34
Northerly, . .	.78	.78	50	15	-	A-G.	35
South-easterly, .	.87	.87	49.5-82.5	24	4	A.	36

3 1894-6-8-9 sections.

4 7.5 feet on 1894 section, and 3 feet on 1895-6-7-8 sections.

TABLE SHOWING THE HIGHWAYS LAID OUT OR

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Monson, . . . .	1894, . . . .	Railroad bridge, . . . . .
2	Monson, . . . .	1901, . . . .	Palmer line, . . . . .
3	Montague, . . . .	1898-9, . . . .	Junction of pipe line and Ferry Road, .
4	Nantucket, . . . .	1894-5-6-7-9-1900-01,	First mile stone, . . . . .
5	Nantucket, . . . .	1903, . . . .	End of 1901 lay-out to Siasconset, . .
6	Natick, . . . .	1901, . . . .	Wellesley line, . . . . .
7	Natick, . . . .	1903, . . . .	Sherborn line, . . . . .
8	Needham, . . . .	1901, . . . .	Newton line, . . . . .
9	New Braintree, . . . .	1897, . . . .	Hardwick line, . . . . .
10	New Braintree, . . . .	1903, . . . .	New Braintree village, . . . . .
11	Newbury, . . . .	1899-1900-01-02, . .	Newburyport line, . . . . .
12	Newburyport, . . . .	1896-7-8, . . . .	West Newbury line, . . . . .
13	Newton, . . . .	1901, . . . .	Needham line, . . . . .
14	Norfolk, . . . .	1895, . . . .	Walpole line to Wrentham line, . .
15	North Adams, . . . .	1894-6-7, . . . .	Williamstown line, . . . . .
16	North Adams, . . . .	1900-01-02, . . . .	Boston & Maine Railroad bridge, Davenport Street.
17	North Adams, . . . .	1903, . . . .	End of 1902 lay-out to Adams line, .
18	North Andover, . . . .	1900-02, . . . .	Lawrence line, . . . . .
19	Northampton, . . . .	1894, . . . .	Hadley bridge, . . . . .
20	Northampton, . . . .	1897-8-9-1900, . .	Easthampton line, <sup>3</sup> . . . . .
21	North Attleborough, . . . .	1894-5-6-7-9, . . . .	Bruce Avenue to Attleborough line, .
22	Northborough (east), . . . .	1897-8, . . . .	Marlborough line, . . . . .
23	Northborough (south), . . . .	1897, . . . .	Westborough line, . . . . .
24	Northborough (west), . . . .	1900-02, . . . .	Shrewsbury line, . . . . .
25	Northfield, . . . .	1901-02, . . . .	Near Mill Brook, . . . . .
26	North Reading, . . . .	1897-8-1901, . . . .	Andover line, . . . . .
27	North Reading, . . . .	1903, . . . .	Reading line, . . . . .
28	Norwood, . . . .	1895-6, . . . .	Ellis Station, . . . . .
29	Norwood, . . . .	1897-9, . . . .	Walpole line, . . . . .
30	Norton, . . . .	1903, . . . .	Norton village to near railroad station,
31	Orange, . . . .	1894-5-7, . . . .	Athol line, . . . . .
32	Orange, . . . .	1900-01, . . . .	Erving line, . . . . .
33	Orange, . . . .	1903, . . . .	End of 1901 lay-out, . . . . .
34	Orleans, . . . .	1900-01, . . . .	Brewster line, . . . . .
35	Orleans, . . . .	1903, . . . .	1½ miles from Shattuck's Corner, .
36	Palmer, . . . .	1899-1900-01, . . . .	Tennyville, near Boston & Albany freight station, to Monson line.

<sup>1</sup> 1899-1900 lay-out.<sup>2</sup> 1900 lay-out.

CONTRACTED FOR BY THE COMMISSION, ETC. — *Continued.*

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length.		Location.	Macadam.	Shoulders.		
	Miles.	Miles.	Feet.	Feet.	Feet.		
Northerly, . .	.93	.93	36	15	3	A.	1
South-easterly, .	.10	.10	50	15	-	A.	2
North-westerly, .	1.63	1.63	60	15	3	A.	3
Easterly, . .	5.88	5.88	66	12-15	3	B-E-G.	4
Easterly, . .	.60	.08	66	15	-	B-G.	5
Westerly, . .	1.14	1.14	60-70	15-18-20	-	A-G.	6
Easterly, . .	2.06	Graded.	60	15	-	D-G.	7
Westerly, . .	1.00	1.00	60-86	22	-	B.	8
Southerly to Ware Hne.	.17	.17	50	15	3	A.	9
Northerly, . .	.22	-	50±	-	-	F.	10
Southerly, . .	2.67	2.67	60-66-80-95	15	13	B.	11
Easterly, . .	1.75	1.75	60-66+-75+	15	3	C.	12
Easterly, . .	1.03	1.03	45-86	22	-	A.	13
South-westerly, .	1.45	1.45	50	15	3	B.	14
Easterly, . .	1.69	1.69	30-66	15	3	D.	15
Southerly, . .	1.49	1.49	50-65	15	23	A.	16
Southerly, . .	.83	.60	50	-	-	N.	17
South-easterly, .	1.68	1.68	60-66	15	23	D-A.	18
South-westerly, .	.56	.56	40	20	3	C.	19
Northerly, . .	1.12	1.12	50	15	3	A.	20
South-westerly, .	3.60	3.60	36-66	24-18-15	3	'94-'95 B,	21
South-westerly, .	1.33	1.33	66	15	4-3	'96-'97-'99 F. B.	22
North-westerly, .	.42	.42	50	15	3	B.	23
Easterly, . .	1.37	1.37	66	15	23	B.	24
Southerly, . .	1.16	1.16	{70-160-135- 156}	15	-	A.	25
Southerly, . .	1.76	1.76	66	15	43	C-B.	26
Northerly, . .	.55	-	66	-	-	-	27
Southerly, . .	1.02	1.02	40-50-67	15	3	B.	28
Northerly, . .	1.03	1.03	45-50-60	15	3	B.	29
Easterly, . .	.72	.72	40	15	3	B.	30
Westerly, . .	2.18	2.18	30-49.5	17	3-5	D-A.	31
Easterly, . .	.83	.83	50	15	-	B.	32
Easterly, . .	.88	.88	50±	15	-	A-G.	33
North-easterly, .	1.24	1.24	50	15	3	B.	34
South-easterly, .	1.00	1.00	50	12	-	B-G.	35
South easterly, .	2.52	2.52	50+	15	3	G-A.	36

3 Exclusive of 1,825 feet at railroad crossing.

4 1897-8 lay-out.

TABLE SHOWING THE HIGHWAYS LAID OUT OR

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Paxton, . . . .	1895-6-7-8-1902, . .	Worcester line, . . . . .
2	Phillipston, . . . .	1897-8-1902, . . .	Athol line, . . . . .
3	Pittsfield, . . . .	1894-8-1901-02, . .	Hancock line, . . . . .
4	Pittsfield, . . . .	1897, . . . . .	Dalton line, . . . . .
5	Plymouth, . . . .	1894-5-6-7-8-1902, .	Manomet village, . . . . .
6	Princeton, . . . .	1897-1900-02, . . .	Princeton station, . . . . .
7	Provincetown, . . . .	1901, . . . . .	Near Truro line, . . . . .
8	Provincetown, . . . .	1903, . . . . .	Allerton Street to Truro line, <sup>3</sup> . . .
9	Quincy, . . . . .	1899, . . . . .	Near Weymouth Fore River bridge, .
10	Quincy, . . . . .	1902, . . . . .	Bralintree line, . . . . .
11	Randolph, . . . . .	1902-03, . . . . .	Quincy line, . . . . .
12	Raynham, . . . . .	1901-02, . . . . .	Taunton line, . . . . .
13	Raynham, . . . . .	1903, . . . . .	End of 1902 lay-out to Raynham village,
14	Reading, . . . . .	1899-1900, . . . . .	Stoneham line, . . . . .
15	Reading, . . . . .	1902, . . . . .	Methodist Episcopal Church, . . .
16	Reading, . . . . .	1903, . . . . .	End of 1902 lay-out to North Reading line.
17	Rehoboth, . . . . .	1895-6-9, . . . . .	Seekonk line, . . . . .
18	Rehoboth, . . . . .	1903, . . . . .	End of 1899 lay-out, . . . . .
19	Revere, . . . . .	1897-8, . . . . .	Boston line, . . . . .
20	Revere, . . . . .	1899, . . . . .	Saugus line, . . . . .
21	Richmond, . . . . .	1897-8-9-1901-02, .	Boston & Albany Railroad station, .
22	Richmond, . . . . .	1903, . . . . .	End of 1902 lay-out, . . . . .
23	Rochester, . . . . .	1903, . . . . .	Marion line to Acushnet line, . . .
24	Rockland, . . . . .	1902, . . . . .	Abington line, . . . . .
25	Rockport, . . . . .	1902, . . . . .	Near Gloucester line, . . . . .
26	Russell, . . . . .	1894-5-6-7-8-9, . .	Westfield line to Huntington line, .
27	Salem, . . . . .	1901, . . . . .	Swampscott line, . . . . .
28	Sandwich, . . . . .	1897-8-1900-02, . .	Barnstable line, . . . . .
29	Saugus, . . . . .	1899, . . . . .	Fox Hill bridge to Revere line, . . .
30	Scituate, . . . . .	1894-5-1900, . . . .	Gannett's Corners, . . . . .
31	Scituate, . . . . .	1903, . . . . .	End of 1900 lay-out, . . . . .
32	Seekonk, . . . . .	1900-01-02, . . . .	Rehoboth line, . . . . .
33	Shelburne, . . . . .	1894-5-6-7, . . . .	Bridge street to Colrain line, . . .
34	Shrewsbury, . . . .	1895-6-7-8-9-1900, .	Worcester line, . . . . .
35	Somerset, . . . . .	1895-6-7-9-1900, . .	Slade's Ferry bridge, . . . . .
36	Somerset, . . . . .	1903, . . . . .	Swansea line, . . . . .

<sup>1</sup> 1894-8 lay-outs.<sup>2</sup> 1897-1900 lay-out.<sup>3</sup> Exclusive of 1901 lay-out.

CONTRACTED FOR BY THE COMMISSION, ETC. — *Continued.*

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length.		Location.	Macadam.	Shoulders.		
	Miles.	Miles.	Feet.	Feet.	Feet.		
North-westerly, .	3.60	3.60	50-65-70	15	3-5	B.	1
Easterly, . . .	1.21	1.21	50	15-12	3-4	B.	2
Easterly, . . .	2.38	2.38	60-50-40	15	13	A.	3
Westerly, . . .	.76	.76	50	15	-	A-G.	4
Northerly, . . .	4.28	4.28	40-50-112	15	3	B.	5
Easterly, . . .	1.58	1.58	50	15	23	B.	6
Westerly, . . .	.22	.22	33	15	-	B.	7
Easterly, . . .	.88	.76	33-50	15	-	O-G.	8
North-westerly, .	.49	.50	63-66	32	-	A.	9
North-westerly, .	.57	.53	66	15	-	B.	10
South-easterly, .	1.38	1.38	66	15	-	B.	11
North-easterly, .	.84	.84	40	15	-	O.	12
North-easterly, .	.64	.64	40+	15	-	O.	13
Northerly, . . .	1.07	1.07	66	15-18	3	B.	14
Northerly, . . .	1.23	1.23	66	15-18	-	B.	15
Northerly, . . .	1.44	-	66	-	-	-	16
Easterly, . . .	1.89	1.89	60	15	3	B.	17
Easterly, . . .	.70	.66	50+	15	-	B-G.	18
North-easterly, .	.58	.58	44-50	24	3	A.	19
South-westerly, .	.67	.67	71	22	2	A.	20
Northerly, . . .	1.92	1.92	66	-	-	F.	21
Northerly, . . .	.46	.46	66	-	-	F.	22
Westerly, . . .	5.27	5.27	33-62	15	3	B.	23
North-easterly, .	1.00	1.00	50	15	-	B.	24
Northerly, . . .	.32	.32	50+	15	-	A.	25
North-easterly, .	6.66	6.66	50	15	43	'94-'95 A, '96-'97-'98-'99 F.	26
Northerly, . . .	.13	.13	60+	-	-	F.	27
Westerly, . . .	2.83	2.83	50	15	3	O-B.	28
Southerly, . . .	1.60	1.60	71+	22	2	A.	29
South-easterly, .	1.77	1.77	30-40-50	15	3	A-B-C.	30
Southerly, . . .	.75	-	40-50	-	-	-	31
Westerly, . . .	1.57	1.57	60	15	53	B.	32
North-easterly, .	2.16	2.16	30-50	18-15	3	B-A.	33
North-easterly, .	3.90	3.90	50-65-66	18-15	5-4-3	B.	34
Northerly, . . .	4.50	4.50	40-50-60	18-15	3	B.	35
South-easterly, .	1.19	1.19	60	15	-	B.	36

4 1894-5 lay-outs.

5 1900 lay-out.

TABLE SHOWING THE HIGHWAYS LAID OUT OR

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Southborough, . . .	1902, . . .	Westborough line, . . .
2	Southbridge, . . .	1902, . . .	Charlton line, . . .
3	South Hadley, . . .	1895-7-8-9-1900, . . .	Granby line, . . .
4	South Hadley, . . .	1903, . . .	End of 1900 lay-out, . . .
5	Spencer, . . .	1897-1900-01, . . .	Leicester line, . . .
6	Sterling, . . .	1897-8, . . .	Near town hall, . . .
7	Stoneham, . . .	1897-8, . . .	South Street, . . .
8	Stoneham, . . .	1900-01, . . .	Reading line, . . .
9	Stoughton, . . .	1902, . . .	Lincoln Street, . . .
10	Stoughton, . . .	1903, . . .	End of 1902 lay-out to Canton line, . . .
11	Sturbridge, . . .	1897, . . .	Fisk Hill Road, . . .
12	Sturbridge, . . .	1903, . . .	End of 1897 lay-out, . . .
13	Sudbury, . . .	1897-8-1900-01-02, . . .	Marlborough line to Wayland line, . . .
14	Sudbury, . . .	1903, . . .	Wayland line to Wayland line, . . .
15	Sunderland, . . .	1897, . . .	Connecticut River bridge, . . .
16	Sunderland, . . .	1903, . . .	End of 1897 lay-out, . . .
17	Sutton, . . .	1899-1901-02, . . .	Millbury line, . . .
18	Sutton, . . .	1903, . . .	Douglas line, . . .
19	Swampscott, . . .	1897-1900-01, . . .	Salem line, . . .
20	Swansea, . . .	1903, . . .	Somerset line, . . .
21	Swansea, . . .	1903, . . .	Myles River bridge, . . .
22	Swansea, . . .	1903, . . .	Myles River bridge, . . .
23	Taunton, . . .	1895-6-8-9-1900-01, . . .	Near Highland Street to Dighton line, . . .
24	Templeton, . . .	1899-1901-02, . . .	Gardner line, . . .
25	Templeton, . . .	1903, . . .	End of 1902 lay-out, . . .
26	Tewksbury, <sup>1</sup> . . .	1900-01-02, . . .	Lowell line, . . .
27	Tewksbury, . . .	1903, . . .	End of 1902 lay-out, . . .
28	Tisbury, . . .	1894, . . .	Vineyard Haven village to West Tisbury line, . . .
29	Townsend, . . .	1896-7-8-9-1900-01, . . .	Groton line, . . .
30	Truro, . . .	1895, . . .	Wellfleet line to Kelly's Corner, . . .
31	Tyngsborough, . . .	1895-6, . . .	Tyngsborough bridge to Lowell line, . . .
32	Uxbridge, . . .	1897-8-1901, . . .	Blackstone line, . . .
33	Uxbridge, . . .	1903, . . .	End of 1901 lay-out, . . .
34	Wales, . . .	1901, . . .	Brimfield line, . . .
35	Walpole (south), . . .	1894-5-7-1900, . . .	Norfolk line, . . .
36	Walpole (north), <sup>4</sup> . . .	1897-8-1900, . . .	Norwood line, . . .

<sup>1</sup> Exclusive of 1,200 feet at railroad crossing.<sup>2</sup> Broken stone and clay.



CONTRACTED FOR BY THE COMMISSION, ETC. — *Continued.*

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length.		Location.	Macadam.	Shoulders.		
	Miles.	Miles.	Feet.	Feet.	Feet.		
Easterly, . .	.76	-	50±	-	-	F.	1
South-westerly, .	.91	.91	50	-	-	F.	2
South-westerly, .	2.42	2.42	36-50	15	3	A.	3
Northerly, . .	1.97	1.97	49.5-60	15	-	A.	4
Westerly, . .	1.60	1.60	50-58-60	15	4-3	B-D.	5
South-westerly, .	1.29	1.29	50	15	3	A.	6
Northerly, . .	.57	.57	60-66	15	7.5	B.	7
Southerly, . .	1.01	1.01	66	15	-	B-G.	8
North-easterly, .	.76	.76	60	15	-	B.	9
Northerly, . .	.40	Graded.	60	15	-	B.	10
North-westerly, .	.58	.58	50	15	4-3	B.	11
North-westerly, .	.60	-	50±	-	-	-	12
Easterly, . .	4.89	4.89	50-60	15	3	B.	13
Easterly, . .	.22	.22	49.5	15-20	-	A.	14
Easterly, . .	.19	.19	50	15	3	A.	15
Southerly, . .	.49	.49	50	15	-	A.	16
Southerly, . .	1.46	1.46	50	15	-	B.	17
Northerly, . .	.47	.47	50±	15	-	B.	18
South-westerly, .	1.48	1.48	60-50-64-50±	18-20	-	F-A.	19
North-westerly, .	.31	.31	50-65	15	-	B-G.	20
Easterly, . .	.50	.50	50-55	15	-	B-G.	21
Westerly, . .	.30	-	40-50	15	-	B-G.	22
Westerly, . .	2.94	2.94	40-66	15	3	B.	23
North-westerly, .	1.43	1.43	50	15	-	A-G.	24
North-westerly, .	.57	.57	50	15	-	A-G.	25
South-easterly, .	1.87	1.87	50	15	-	A.	26
South-easterly, .	1.57	1.23	50±	15	-	A.	27
South-westerly, .	1.93	1.93	50	15	3	B.	28
North-westerly, .	4.69	4.21	50-55-60	15	3	B-A-F-G.	29
Northerly, . .	2.36	2.36	10 <sup>2</sup> -15 <sup>3</sup>	-	-	K-M.	30
South-easterly, .	2.95	2.95	60	15	3	A-D.	31
North-westerly, .	1.78	1.74	50	15	3-5	B-A.	32
North-westerly, .	.40	.44	50±	-	-	F.	33
South-westerly, .	1.04	1.04	50±	-	-	F.	34
Northerly, . .	2.60	2.60	50	15	3	C-B.	35
Southerly, . .	1.94	1.94	50	15	3	B.	36

<sup>3</sup> Beach stone.<sup>4</sup> Exclusive of 150 feet at Neponset River.

TABLE SHOWING THE HIGHWAYS LAID OUT OR

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Ware, . . . . .	1897-9-1900, . . .	New Braintree line, . . . . .
2	Ware, . . . . .	1903, . . . . .	End of 1900 lay-out, . . . . .
3	Wareham, . . . . .	1896-1901, . . . . .	Marion line, . . . . .
4	Wareham, . . . . .	1898-1901, . . . . .	Cohasset Narrows bridge, . . . . .
5	Warren, . . . . .	1896-7-8, . . . . .	West Warren, . . . . .
6	Warren, . . . . .	1899-1900-01, . . .	Warren village to West Brookfield line,
7	Watertown, . . . . .	1895-6, . . . . .	Waltham line, . . . . .
8	Wayland, <sup>1</sup> . . . . .	1897-1900, . . . . .	Weston line, . . . . .
9	Wayland, . . . . .	1903, . . . . .	Sudbury line, . . . . .
10	Wellesley, . . . . .	1901, . . . . .	Natick line, . . . . .
11	Wellfleet, . . . . .	1903, . . . . .	Eastham line, . . . . .
12	Wenham, . . . . .	1897-1901, . . . . .	Beverly line, . . . . .
13	Wenham, . . . . .	1903, . . . . .	End of 1901 lay-out to Hamilton line, .
14	Westborough, . . . . .	1897, . . . . .	Near insane hospital to Northborough line
15	Westborough, . . . . .	1903, . . . . .	Southborough line, . . . . .
16	West Boylston, . . . . .	1897-8, . . . . .	Worcester line, . . . . .
17	West Bridgewater, . . . . .	1900-01-02, . . . . .	Brockton line, . . . . .
18	West Brookfield, . . . . .	1899-1900-01, . . .	Brookfield line, . . . . .
19	West Brookfield, . . . . .	1899, . . . . .	Ware line to Ware line, . . . . .
20	Westfield, . . . . .	1894-6-8-9, . . . . .	West Springfield line, . . . . .
21	Westfield, . . . . .	1898-9-1900-01-02, . . .	End of town macadam to Russell line,
22	Westford, . . . . .	1902, . . . . .	Littleton line, . . . . .
23	Westford, . . . . .	1903, . . . . .	End of 1902 lay-out at Minot's Corner,
24	Westminster, . . . . .	1894-5-6-7-8-9, . . .	Fitchburg line, . . . . .
25	Westminster, . . . . .	1903, . . . . .	Gardner line, . . . . .
26	West Newbury, . . . . .	1895-6-7, . . . . .	Newburyport line, . . . . .
27	West Newbury, . . . . .	1903, . . . . .	Groveland line, . . . . .
28	Weston, . . . . .	1898-9, . . . . .	Near Waltham line to Wayland line, .
29	Westport, . . . . .	1894-6-7-8, . . . . .	Dartmouth line, . . . . .
30	West Springfield, . . . . .	1895-6, . . . . .	Top of Tatham Hill, . . . . .
31	West Tisbury, . . . . .	1895-6-7, . . . . .	Tisbury line, . . . . .
32	Westwood, . . . . .	1899-1900, . . . . .	Norwood line to Dedbam line, . . .
33	Weymouth, . . . . .	1894, . . . . .	Holbrook line to Abington line, . . .
34	Weymouth, . . . . .	1895-6-7, . . . . .	Fore River to Back River, . . . . .
35	Weymouth, . . . . .	1903, . . . . .	Broad Street, . . . . .
36	Whately, <sup>3</sup> . . . . .	1899-1901-02, . . . . .	Deerfield line, . . . . .

<sup>1</sup> Exclusive of 1,800 feet at Concord River and railroad crossing.

CONTRACTED FOR BY THE COMMISSION, ETC. — *Continued.*

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length.		Location.	Macadam.	Shoulders.		
	Miles.	Miles.	Feet.	Feet.	Feet.		
Southerly, . . .	1.80	1.80	50	15	3	A.	1
Southerly, . . .	.48	.48	50	15	-	A.	2
North-easterly, . .	.71	.71	50	15	3	B.	3
Westerly, . . .	1.82	1.82	40±-50	15	3	B.	4
Easterly, . . .	1.89	1.89	49.5-50	15	3-4	A.	5
Easterly, . . .	1.41	1.41	49.5	15	-	A-G.	6
Easterly, . . .	.85	.85	36	27	3-4	A-B.	7
North-westerly, . .	2.27	2.27	50	15	3	B.	8
Easterly, . . .	.29	.29	49.5-66-99	15	-	A.	9
Easterly, . . .	1.18	1.18	52-60-70	15	-	A-G.	10
Northerly, . . .	1.74	1.74	40	15	-	K.	11
Northerly, . . .	1.11	1.11	50	18-15	-	A.	12
Northerly, . . .	.64	.64	50-60	15	-	A.	13
North-westerly, . .	.70	.70	50	15	3	B.	14
South-westerly, . .	1.46	-	50	-	-	F.	15
Northerly, . . .	1.55	1.55	50	15	3	'97 H, '98 A-H.	16
Southerly, . . .	2.74	2.74	{ 50-55+- } { 60+-115 }	15	-	B.	17
North-westerly, . .	1.50	1.50	50	15	-	A.	18
South-westerly, . .	.15	.15	50	15	3	A.	19
Westerly, . . .	2.22	2.22	50	18-15	3	A.	20
Westerly, . . .	3.59	3.59	50+-50	18-15	2 3	A-B.	21
Northerly, . . .	2.45	2.45	40-50	15	-	F.	22
Northerly, . . .	.80	.80	50	21	-	F.	23
South-westerly, . .	3.00	3.00	50-60	15	3	D-C.	24
Easterly, . . .	2.25	1.40	66±	-	-	F.	25
Westerly, . . .	2.24	2.24	50-110	15	3-4.5	A-D.	26
North-easterly, . .	.37	.37	50	15	-	A.	27
Westerly, . . .	3.15	3.15	50	18	-	C-B.	28
Easterly, . . .	4.25	4.25	66-80	18	3	C-B.	29
Easterly, . . .	1.53	1.53	50-136	18	3	A.	30
South-westerly, . .	2.84	2.84	50	15-12-10	3	B.	31
Northerly, . . .	1.05	1.05	45-55-60	15	3	B.	32
Easterly, . . .	.25	.25	50	15	3	B.	33
Westerly, . . .	1.75	1.75	125-50	15-18	3	A-B-C.	34
Southerly, . . .	1.69	-	60-66	20-18-15	-	B-F.	35
South-westerly, . .	1.81	1.81	50-50±	12	-	A.	36

2 1898-9-1900 lay-outs.

3 Exclusive of 375 feet at railroad crossing.

TABLE SHOWING THE HIGHWAYS LAID OUT OR

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Whately, . . . .	1903, . . . .	End of 1902 lay-out, . . . .
2	Whitman, . . . .	1894-5-6, . . . .	Brockton line, . . . .
3	Wilbraham, . . . .	1895-6-7-1901, . . . .	Springfield line, . . . .
4	Wilbraham, <sup>1</sup> . . . .	1903, . . . .	End of 1901 lay-out, . . . .
5	Williamsburg, . . . .	1896-8-1901, . . . .	Goshen line, . . . .
6	Williamsburg, . . . .	1903, . . . .	End of 1901 lay-out, . . . .
7	Williamstown, . . . .	1895-6-8, . . . .	North Adams line, . . . .
8	Williamstown, . . . .	1903, . . . .	At Green River bridge, . . . .
9	Winchester, . . . .	1899-1900, . . . .	Arlington line to Woburn line, . . . .
10	Windsor, . . . .	1897-1902, . . . .	Cummington line, . . . .
11	Windsor, . . . .	1903, . . . .	End of 1902 lay-out, . . . .
12	Woburn, . . . .	1900-01-02, . . . .	Winchester line to Burlington line, . . . .
13	Worcester, . . . .	1896-7, . . . .	Paxton line, . . . .
14	Worcester, . . . .	1897, . . . .	Holden line, . . . .
15	Worcester, . . . .	1903, . . . .	End of 1897 lay-out, . . . .
16	Worcester, . . . .	1900, . . . .	West Boylston line, . . . .
17	Wrentham, . . . .	1894-5-9-1900-01, . . . .	Plainville, . . . .
18	Wrentham, . . . .	1897-8-1902, . . . .	Norfolk line, . . . .
19	Yarmouth (north), . . . .	1894-5-6, . . . .	Barnstable line to Dennis line, . . . .
20	Yarmouth (south), . . . .	1895-6-7, . . . .	Bass River bridge to Barnstable line, . . . .

<sup>1</sup> Exclusive of 1,763 feet at village.

CONTRACTED FOR BY THE COMMISSION, ETC. — *Concluded.*

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length.		Location.	Macadam.	Shoulders.		
	Miles.	Miles.	Feet.	Feet.	Feet.		
Southerly, . .	.48	.44	50	12	-	A.	1
Easterly, . .	1.70	1.70	45	18	4	B.	2
Easterly, . .	2.78	2.78	50-79	15	3	A.	3
Easterly, . .	.84	.84	50	15	-	A-G.	4
South-easterly, .	2.11	2.11	50	15	-	B-F.	5
South-easterly, .	.53	.40	50	-	-	N.	6
Westerly, . .	1.92	1.92	50-60-70	15	3	D.	7
-	.03	.03	50	15	-	A.	8
North-easterly, .	1.96	1.96	50	15-21-20	-	C.	9
Westerly, . .	.66	.66	50	-	-	F.	10
Westerly, . .	.32	.32	50 $\frac{1}{2}$	-	-	F.	11
North-westerly, .	2.03	2.03	40-50	15	-	G-C-B.	12
South-easterly, .	1.35	1.35	50	15	3	B.	13
Southerly, . .	.66	.66	50	15	3	B.	14
Southerly, . .	.84	.75	50	15	-	B.	15
South-westerly, .	.54	.54	50	15	3	A.	16
Northerly, . .	4.02	4.02	26-50	15	3	B.	17
South-easterly, .	1.86	1.86	50	15	3	B-A.	18
Easterly, . .	3.71	3.71	40-60	15	3	B.	19
Westerly, . .	5.09	5.09	40	15	3	B-C.	20

## APPENDIX B.

TABLE SHOWING TOWNS AND CITIES IN WHICH WORK HAS BEEN DONE DURING THE YEAR 1903,  
AND THE RESIDENT ENGINEERS ON SUCH WORK, TOGETHER WITH DATES OF BEGINNING  
AND ENDING.

TOWN OR CITY.	County.	Lay-out.	Resident Engineer.	Date of Contract.	Date of Beginning.	Date of Ending.
Abington, .	Plymouth, .	1903	Norton, C. H.,	June 24, 1903,	July 9,	1903. Sept. 29.
Adams, .	Berkshire, .	1897	Brown, G. R.,	July 16, 1903,	Aug. 21,	Sept. 30.
Agawam, .	Hampden, .	1903	Winslow, D. H.,	July 9, 1903,	July 20,	Sept. 19.
Amesbury, .	Essex, .	1903	Southworth, A. L.,	Sept. 3, 1903,	Oct. 2,	Nov. 14.
Amesbury, .	Essex, .	1903	Ayres, E. F.,	Sept. 3, 1903,	Nov. 16,	Dec. 7.
Andover, .	Essex, .	1903	Morris, F. H.,	June 11, 1903,	Sept. 3,	Nov. 10.
Andover, .	Essex, .	1903	Gray, A. W.,	June 11, 1903,	Nov. 10,	Dec. 11.
Ashland, .	Middlesex, .	1903	Winslow, G. R.,	Nov. 12, 1903,	Nov. 12,	Dec. 19.
Athol, .	Worcester, .	1902	Gerry, L. L.,	Aug. 28, 1902,	April 1,	July 13.
Athol, .	Worcester, .	1903	Gerry, L. L.,	Aug. 13, 1903,	Sept. 16,	Nov. 24.
Attleborough, .	Bristol, .	1903	Litchfield, S. Jr.,	June 18, 1903,	June 30,	Aug. 14.
Barre, .	Worcester, .	1902	Packard, S. G.,	July 3, 1902,	Mar. 23,	Mar. 28.
Bedford, .	Middlesex, .	1902	Nichols, E. J.,	July 10, 1902,	July 22,	Nov. 1.
Blackstone, .	Worcester, .	1902	Welton, C. A.,	Aug. 21, 1902,	Mar. 6,	Apr. 27.
Bourne, .	Barnstable, .	1903	Dickinson, D. H.,	Sept. 24, 1903,	Oct. 31,	Dec. 6.
Bourne, .	Barnstable, .	1903	Holden, H. C.,	Sept. 24, 1903,	Dec. 6,	Dec. 24.
Brookfield, .	Worcester, .	1903	Winslow, D. H.,	Aug. 13, 1903,	Sept. 17,	Nov. 19.
Buckland, .	Franklin, .	1903	Packard, S. G.,	April 16, 1903,	Aug. 20,	Sept. 1.
Buckland, .	Franklin, .	1903	Packard, S. G.,	May 14, 1903,	May 22,	Nov. 14.
Burlington, .	Middlesex, .	1903	Dickinson, D. H.,	April 9, 1903,	Apr. 22,	July 9.

Burlington,	Middlesex,	1903	Raymond, C. A.,	July	9, 1903,	July	13,	Sept. 11.
Charlton, .	Worcester,	1901-02	Welton, C. A.,	Oct.	3, 1901,	May	27,	Sept. 26.
Chelmsford,	Middlesex,	1903	Loring, L. T. C.,	July	23, 1903,	July	31,	Sept. 26.
Chicopee, .	Hampden,	1902	Packard, S. G.,	Oct.	30, 1902,	May	11,	May 19.
Cohasset, .	Norfolk,	1903	Everett, P. H.,	Oct.	30, 1902,	May	19,	Aug. 22.
Dalton, .	Berkshire,	1903	Dickinson, D. H.,	June	24, 1903,	Sept.	9,	Oct. 22.
Dartmouth,	Bristol,	1903	Sanborn, G. W.,	Aug.	20, 1903,	Sept.	25,	Nov. 7.
Deerfield, .	Franklin,	1902-03	Bagge, G. W.,	Nov.	5, 1903,	Nov.	2,	Dec. 31.
Dighton, .	Bristol,	1903	Everett, P. H.,	Aug.	6, 1903,	Oct.	29,	Nov. 18.
Douglas, .	Worcester,	1902	Litchfield, S. Jr.,	June	18, 1903,	June	30,	Oct. 9.
Eastham, .	Barnstable,	1903	Welton, C. A.,	Oct.	16, 1902,	Apr.	22,	Aug. 18.
Edgartown,	Dukes, .	1903	Howes, C. H.,	Oct.	16, 1902,	May	15,	Aug. 14.
Essex, .	Essex, .	1902-03	Holden, H. C.,	Aug.	13, 1903,	Aug.	25,	Sept. 29.
Fitchburg,	Worcester,	1903	Gerry, L. L.,	July	24, 1902,	June	8,	Aug. 10.
Fitchburg,	Worcester,	1903	Gerry, L. L.,	June	24, 1903,	July	8,	Oct. 7.
Foxborough,	Norfolk,	1902	Holden, H. C.,	Aug.	21, 1902,	Oct.	13,	Dec. 1.
Freetown, .	Bristol, .	1902	Holden, H. C.,	Aug.	14, 1902,	Apr.	2,	May 12.
Freetown, .	Bristol, .	1903	Holden, H. C.,	July	16, 1903,	Apr.	5,	May 27.
Great Barrington,	Berkshire,	1902	Brown, G. R.,	Oct.	16, 1902,	July	22,	Nov. 25.
Greenfield,	Franklin,	1903	Everett, P. H.,	Oct.	8, 1903,	Mar.	31,	May 13.
Groton, .	Middlesex,	1902	Gerry, L. L.,	Oct.	8, 1903,	Oct.	27,	Nov. 7.
Groveland,	Essex, .	1902	Ayres, E. F.,	June	11, 1903,	July	6,	Aug. 15.
Hadley, .	Hampshire,	1903	Everett, P. H.,	July	23, 1903,	Aug.	4,	Dec. 5.
Hancock, .	Berkshire,	1895	Brown, G. R.,	Aug.	20, 1903,	Sept.	29,	Nov. 28.
Harwich, .	Barnstable,	1902	Howes, C. H.,	Aug.	27, 1903,	Sept.	28,	Nov. 24.
Harwich, .	Barnstable,	1903	Howes, C. H.,	July	3, 1902,	May	18,	July 2.
Haverhill,	Essex, .	1903	Ayres, E. F.,	June	11, 1903,	July	7,	Dec. 17.
Huntington,	Hampshire,	1903	Brown, G. R.,	April	9, 1903,	May	2,	Aug. 17.
Hinsdale, .	Berkshire,	1903	Brown, G. R.,	Sept.	17, 1903,	Oct.	19,	Dec. 2.
Littleton, .	Middlesex,	1902	Gray, A. W.,	Oct.	8, 1903,	Oct.	20,	Dec. 5.
Littleton, .	Middlesex,	1903	Gray, A. W.,	Aug.	7, 1902,	Mar.	24,	Sept. 16.
				Aug.	7, 1902,	June	8,	Sept. 16.

TABLE SHOWING TOWNS AND CITIES IN WHICH WORK HAS BEEN DONE, ETC.—*Concluded.*

TOWN OR CITY.	County.	Lay-out.	Resident Engineer.	Date of Contract.	Date of Beginning.	Date of Ending.
Lauenburg,	Worcester,	1903	Gerry, L. L.,	July 16, 1903,	1903.	1903.
Marion,	Plymouth,	1901	Holden, H. C.,	Mar. 27, 1902,	July 30,	Sept. 25.
Marion,	Plymouth,	1903	Dickinson, D. H.,	Oct. 8, 1903,	June 12,	Aug. 25.
Marlborough,	Middlesex,	1902	Raymond, C. A.,	Oct. 2, 1902,	Oct. 27,	Dec. 5.
Marlborough,	Middlesex,	1903	Raymond, C. A.,	Aug. 13, 1903,	July 24,	Oct. 31.
Marshallfield,	Plymouth,	1902	Litchfield, S., Jr.,	Oct. 30, 1902,	Sept. 1,	Dec. 4.
Matapoisett,	Plymouth,	1903	Dickinson, D. H.,	Aug. 27, 1903,	Apr. 23,	June 26.
Merrimac,	Essex,	1903	Southworth, A. L.,	Aug. 6, 1903,	Oct. 23,	Nov. 24.
Middleborough,	Plymouth,	1902	Holden, H. C.,	Sept. 4, 1902,	Aug. 24,	Nov. 10.
Middleborough,	Plymouth,	1903	Holden, H. C.,	June 18, 1903,	Mar. 16,	Aug. 22.
Millbury,	Worcester,	1902	Welton, C. A.,	Aug. 28, 1902,	July 7,	Nov. 28.
Millbury,	Worcester,	1903	Welton, C. A.,	July 30, 1903,	Apr. 13,	May 19.
Nantucket,	Nantucket,	1903	Loring, L. T. C.,	Sept. 17, 1903,	Aug. 25,	Nov. 6.
Natick,	Middlesex,	1903	Winslow, G. R.,	Sept. 10, 1903,	Nov. 10,	Dec. 31.
North Adams,	Berkshire,	1903	Brown, G. R.,	July 9, 1903,	Sept. 30,	Nov. 24.
North Andover,	Essex,	1902	Winslow, G. R.,	Sept. 27, 1902,	July 20,	Sept. 12.
Orange,	Franklin,	1903	Gerry, L. L.,	Mar. 19, 1903,	Apr. 17,	July 25.
Orleans,	Barnstable,	1903	Howes, C. H.,	Sept. 3, 1903,	Sept. 23,	Dec. 17.
Pittsfield,	Berkshire,	1897	Brown, G. R.,	Aug. 27, 1903,	Aug. 31,	Oct. 21.
Pittsfield,	Berkshire,	1902	Brown, G. R.,	Sept. 18, 1902,	Apr. 30,	June 18.
Princeton,	Worcester,	1902	Welton, C. A.,	Aug. 28, 1903,	Apr. 28,	Aug. 18.
Princeton,	Worcester,	1903	Dadley, A. D.,	Aug. 27, 1903,	Oct. 28,	Dec. 2.
Provincetown,	Barnstable,	1903	Howes, C. H.,	Oct. 30, 1902,	Sept. 8,	Dec. 12.
Randolph,	Norfolk,	1902-03	Norton, C. H.,	Aug. 13, 1903,	Apr. 25,	June 13.
Raynham,	Bristol,	1903	Litchfield, S., Jr.,	Oct. 2, 1902,	Aug. 24,	Oct. 19.
Reading,	Middlesex,	1902	Gray, A. W.,	Oct. 2, 1902,	May 11,	June 24.
Reading,	Middlesex,	1902	Dickinson, D. H.,	Oct. 2, 1902,	June 24,	July 25.



Reliboth.	.	.	.	.	.	1903	Litchfield, S. J., Jr.,	.	.	Sept. 17, 1903,	Oct. 13,	Dec. 12.
Richmond,	.	.	.	.	.	1902	Brown, G. R.,	.	.	July 3, 1902,	Sept. 21,	Oct. 17.
Richmond,	.	.	.	.	.	1903	Brown, G. R.,	.	.	Aug. 27, 1903,	Sept. 21,	Nov. 18.
Rockland,	.	.	.	.	.	1902	Norton, C. H.,	.	.	Oct. 2, 1902,	June 4,	Sept. 16.
Rockport,	.	.	.	.	.	1902	Gray, A. W.,	.	.	Aug. 6, 1903,	Aug. 10,	Aug. 31.
Somerset,	.	.	.	.	.	1903	Bagge, G. W.,	.	.	April 30, 1903,	May 21,	Sept. 1.
South Hadley,	.	.	.	.	.	1903	Everett, P. H.,	.	.	April 9, 1903,	May 19,	Oct. 23.
Stoughton,	.	.	.	.	.	1903	Holden, H. C.,	.	.	Nov. 5, 1903,	Nov. 12,	Nov. 28.
Sunderland,	.	.	.	.	.	1903	Everett, P. H.,	.	.	Aug. 17, 1903,	Sept. 14,	Nov. 21.
Sutton,	.	.	.	.	.	1903	Welton, C. A.,	.	.	July 2, 1903,	Aug. 3,	Oct. 24.
Swansea (1),	.	.	.	.	.	1903	Bagge, G. W.,	.	.	April 30, 1903,	May 21,	Sept. 1.
Swansea (2),	.	.	.	.	.	1903	Bagge, G. W.,	.	.	Aug. 13, 1903,	Aug. 31,	Oct. 16.
Templeton,	.	.	.	.	.	1903	Gerry, L. L.,	.	.	Aug. 13, 1903,	Oct. 9,	Nov. 2.
Tewksbury,	.	.	.	.	.	1903	Loring, L. T. C.,	.	.	Aug. 17, 1903,	Sept. 1,	Nov. 9.
Tewksbury,	.	.	.	.	.	1903	Nichols, E. J.,	.	.	Aug. 17, 1903,	Nov. 9,	Nov. 23.
Townsend,	.	.	.	.	.	1902	Gerry, L. L.,	.	.	July 16, 1903,	July 29,	Sept. 23.
Uxbridge,	.	.	.	.	.	1903	Welton, C. A.,	.	.	July 2, 1903,	July 3,	Oct. 7.
Ware,	.	.	.	.	.	1903	Everett, P. H.,	.	.	July 23, 1903,	Aug. 3,	Oct. 7.
Wareham,	.	.	.	.	.	1901	Holden, H. C.,	.	.	Dec. 14, 1902,	June 15,	Aug. 25.
Wellfleet,	.	.	.	.	.	1903	Howes, C. H.,	.	.	Oct. 16, 1902,	May 15,	Aug. 14.
Wenham,	.	.	.	.	.	1903	Raymond, C. A.,	.	.	Aug. 27, 1903,	Sept. 17,	Nov. 25.
Westford,	.	.	.	.	.	1902	Gray, A. W.,	.	.	Aug. 7, 1902,	Mar. 24,	Sept. 16.
Westminster,	.	.	.	.	.	1903	Holmes, F. C.,	.	.	Sept. 3, 1903,	Sept. 9,	Nov. 13.
Westminster,	.	.	.	.	.	1903	Gerry, L. L.,	.	.	Sept. 3, 1903,	Sept. 9,	Nov. 28.
West Newbury,	.	.	.	.	.	1903	Ayres, E. F.,	.	.	July 23, 1903,	Aug. 4,	Dec. 5.
Whately,	.	.	.	.	.	1903	Everett, P. H.,	.	.	Aug. 6, 1903,	Oct. 5,	Nov. 28.
Wilbraham,	.	.	.	.	.	1903	Winslow, D. H.,	.	.	Mar. 19, 1903,	April 2,	July 11.
Williamsburg,	.	.	.	.	.	1903	Everett, P. H.,	.	.	July 16, 1903,	Sept. 15,	Oct. 23.
Williamsburg,	.	.	.	.	.	1903	Norton, C. H.,	.	.	July 16, 1903,	Oct. 23,	Nov. 13.
Williamsburg,	.	.	.	.	.	1903	Packard, S. G.,	.	.	July 16, 1903,	Nov. 13,	Dec. 9.
Windsor,	.	.	.	.	.	1903	Brown, G. R.,	.	.	Sept. 24, 1903,	Oct. 24,	Nov. 27.
Worcester,	.	.	.	.	.	1903	Welton, C. A.,	.	.	Sept. 3, 1903,	Sept. 24,	Dec. 1.

## APPENDIX C.

## SHOWING CONTRACT PRICES ON

	TOWN OR CITY.	Contract Number.	Contractor.	EXCAVATION.			Portland Cement Concrete Masonry.	Shaping (Square Yard).
				All Kinds (Cubic Yard).	Borrow (Cubic Yard).	Ledge (Cubic Yard).		
1	Abington, . .	721	Edward J. Rourke and Hervey B. Russell.	\$0 50	\$0 60	\$2 50	\$6 00	\$0 03
2	Adams, . .	730	John W. Polcaro, .	55	-	-	{ 15 00 27 00 }	{ - }
3	Agawam, . .	727	James Cosgrove, .	35	50	1 25	6 00	02
4	Amesbury, . .	763	James E. Watkins, .	45	45	50	8 00	03
5	Andover, . .	715	Town, . . . .	50	55	1 75	6 00	03
6	Ashland, . .	785	Auguste Saucier, .	24½	27	1 75	5 00	-
7	Athol, . .	745	Town, . . . .	35	45	1 75	6 00	03
8	Attleborough, .	718	David Hall, . .	40	65	1 75	10 00	-
9	Bourne, . .	771	Chas. H. Thomas and J. A. Thomas.	33	-	3 00	10 00	03½
10	Brookfield, . .	744	Fred T. Ley & Co., .	38	45	3 00	7 00	03
11	Buckland (abutments) <sup>10</sup>	711	Town, . . . .	-	-	-	-	-
12	Buckland (super-structure).	713	United Construction Co.	11,739 00	12-	-	-	-
13	Burlington, . .	707	John A. Gaffey, .	50	70	2 00	8 00	02½
14	Burlington, . .	728	John A. Gaffey, .	48	62	1 90	8 00	02½
15	Cheimsford, .	735	Hub Construction Co.,	65	45	-	12 00	02
16	Chicopee, . .	772	City, . . . .	40	60	-	-	03
17	Cohasset, . .	722	Town, . . . .	45	50	-	6 00	03
18	Dalton, . .	755	Lane Construction Corp.	60	60	1 50	8 00	03
19	Dartmouth, . .	780	John F. Magee, . .	65	50	-	9 00	-
20	Deerfield, . .	740	Fred E. Ellis, . .	60	70	-	-	03
21	Dighton, . .	719	Wm. J. McCarthy, .	37½	48	2 50	5 00	02½
22	Duxbury, . .	781	John S. Lane & Sons,	40	45	01	8 00	03
23	Edgartown, . .	746	Town, . . . .	25	30	-	8 00	02
24	Fitchburg, . .	723	Richmond F. Hudson,	60	50	2 00	8 00	03
25	Freetown, <sup>16</sup> .	731	Town, . . . .	-	-	-	-	-

<sup>1</sup> Dry masonry.<sup>2</sup> Cement masonry.<sup>3</sup> 8-inch clay.<sup>4</sup> To be relaid.<sup>5</sup> 15-inch clay.<sup>6</sup> 16-inch iron.<sup>7</sup> Gravel.<sup>8</sup> Riprap (square yards).<sup>9</sup> Screened gravel.

## APPENDIX C.

## STATE ROADS DURING 1903.

BROKEN STONE.		PIPE CULVERTS (PER LINEAL FOOT).						Fencing (Lineal Foot).		Stone Filling for Under-drains (per Cubic Yard).	Bounds (Each).	Catch-basins (Each).	
Local (Ton).	Trap (Ton).	CLAY.			IRON.			Side Drains (Lineal Foot).					
		Twelve-inch.	Eighteen-inch.	Twenty-four-inch.	Twelve-inch.	Eighteen-inch.	Twenty-four-inch.						
\$1 60	-	-	-	-	-	-	-	\$0 25	-	-	\$1 50	-	1
-	\$2 23	-	-	-	-	-	-	-	-	-	-	-	2
-	2 00	<sup>3</sup> \$0 55	-	-	-	-	-	25	-	-	1 50	\$17 00	3
1 55	-	{ <sup>430</sup> 75	\$1 35	<sup>5</sup> \$0 95	<sup>6</sup> \$2 60	-	-	20	\$0 40	-	1 50	25 00	4
1 65	-	75	1 40	-	-	-	-	25	-	-	1 50	Cost.	5
-	-	58	-	-	2 25	-	-	25	-	<sup>7</sup> \$0 40	50	-	6
1 40	-	70	-	-	2 25	-	-	20	50	<sup>8</sup> 1 00	1 50	30 00	7
-	-	-	<sup>51</sup> 1 00	-	-	-	-	26	-	<sup>9</sup> 1 60	2 00	-	8
2 05	-	<sup>360</sup>	-	-	-	-	-	40	-	-	1 50	40 00	9
-	2 10	65	<sup>575</sup>	-	1 50	<sup>6</sup> \$2 00	-	25	60	-	1 50	15 00	10
-	-	-	-	-	-	-	-	-	-	-	-	-	11
-	-	-	-	-	-	-	-	-	-	-	-	-	12
1 70	-	{ <sup>430</sup> 75	-	-	-	-	-	25	40	-	2 00	-	13
1 70	-	75	1 25	-	<sup>62</sup> 75	-	-	25	-	-	2 00	-	14
-	<sup>12</sup> 2 05	75	-	-	-	-	-	25	-	-	1 00	15 00	15
-	2 10	75	<sup>350</sup>	-	2 50	-	-	-	-	-	1 50	25 00	16
-	<sup>13</sup> 1 70	70	-	-	-	-	-	25	-	-	2 00	25 00	17
-	1 90	75	1 25	{ <sup>1465</sup> 51 00	1 75	<sup>15</sup> 1 50	-	35	40	-	2 00	25 00	18
-	-	-	-	-	-	-	-	-	-	-	2 00	-	19
-	2 19	-	-	-	-	-	-	-	-	-	2 00	-	20
1 40	-	70	-	2 50	3 00	-	-	24	40	-	2 50	-	21
-	1 90	75	<sup>1470</sup>	2 50	-	-	-	25	-	-	2 00	25 00	22
2 10	-	<sup>345</sup>	-	-	-	-	-	20	-	-	1 00	25 00	23
1 55	-	70	1 80	-	-	-	-	25	45	-	2 00	25 00	24
-	-	-	-	-	-	-	-	-	-	-	-	-	25

<sup>10</sup> Work paid for at actual cost. <sup>13</sup> Stone from Cohasset quarries. <sup>15</sup> 10-inch iron.<sup>11</sup> Plate girder bridge.<sup>14</sup> 10-inch clay.<sup>16</sup> 66 cents per lineal foot of road.<sup>12</sup> Price per pound for furnishing and delivering I-beams and rods, \$0.0304.

## SHOWING CONTRACT PRICES ON

	TOWN OR CITY.	Contract Number.	Contractor.	EXCAVATION.			Portland Cement Concrete Masonry.	Shaping (Square Yard).
				All Kinds (Cubic Yard).	Borrow (Cubic Yard).	Ledge (Cubic Yard).		
1	Greenfield, . .	776	Town, . . . .	\$0 50	\$0 45	\$1 75	\$8 00	\$0 03
2	Groton, . . .	716	Fred E. Ellis, . .	65	70	-	9 00	03
3	Groveland West Newbury.	736	Hub Construction Co.,	50	60	1 75	15 00	03
4	Hadley, . . .	756	Fred E. Ellis, . .	45	42	01	7 50	03
5	Hancock, . . .	757	Olin T. Benedict, .	30	-	-	-	-
6	Harwich, . . .	717	William Sears, . .	40	160	260	10 00	03
7	Haverhill, . .	708	Lane Construction Corp.	50	65	3 00	8 00	03
8	Hinsdale, . . .	778	Hammond & Walsh, .	29	44	3 00	7 00	02
9	Huntington, . .	768	Lane Construction Corp.	40	60	1 50	10 00	03
10	Lunenburg, . .	732	Fred E. Ellis, . .	48	54	2 00	9 00	03
11	Lynn, . . . .	787	Fred E. Ellis, . .	101 04	45	111 28	10 00	-
12	Marion, <sup>14</sup> . . .	777	Town, . . . .	-	-	-	-	-
13	Marlborough, .	747	City, . . . .	50	60	2 00	7 00	03
14	Mattapoissett, .	758	Town, . . . .	40	45	2 00	8 00	03
15	Merrimac, . . .	741	James E. Watkins, .	40	45	1 25	7 00	02 $\frac{1}{2}$
16	Middleborough, .	720	G. M. Quirk & Co., .	31	31	3 50	7 00	04
17	Millbury, . . .	738	Town, . . . .	50	50	2 00	8 00	03
18	Nantucket, . . .	769	Town, . . . .	30	35	275	-	03
19	Natick, . . . .	767	Town, . . . .	45	75	1 75	8 00	02
20	New Braintree, .	782	James Cosgrove, .	45	55	181 00	-	-
21	North Adams, .	729	John W. Polcaro, .	60	50	-	7 00	-
22	Orange, . . . .	705	Fred E. Ellis, . .	40	40	1 00	8 00	03
23	Orleans, . . . .	764	Town, . . . .	25	35	2 00	8 00	03
24	Pittsfield, . . .	759	Olin T. Benedict, .	70	50	-	-	-
25	Provincetown, .	760	Harry J. Connor, .	30	-	-	7 00	02 $\frac{1}{2}$
26	Raynham, . . .	749	John S. Lane & Sons,	50	55	2 00	10 00	03
27	Rehoboth, . . .	770	Town, . . . .	{ 2262 $\frac{1}{2}$ 30 }	35	2 00	{ 234 00 8 00 }	02
28	Richmond, . . .	762	Town, . . . .	45	50	2 00	{ 2412 00 77 00 6 00 }	-
29	Rockport, . . .	742	Fred E. Ellis, . .	-	65	-	-	03
30	Scituate, . . .	789	Ferranti & Maguire, .	35	60	1 75	10 00	03

<sup>1</sup> Clay hardening.<sup>2</sup> Clay binder.<sup>3</sup> Stone from Cohasset quarries.<sup>4</sup> 8-inch clay.<sup>5</sup> Leaching basins.<sup>6</sup> 15-inch clay.<sup>7</sup> Class B masonry.<sup>8</sup> 10-inch clay.<sup>9</sup> 10-inch iron.<sup>10</sup> Riprap (square yards).<sup>11</sup> Rock embankment.<sup>12</sup> 6-inch clay.

STATE ROADS DURING 1903 — *Continued.*

BROKEN STONE.		PIPE CULVERTS (PER LINEAL FOOT).						Fencing (Lineal Foot).	Slide Drains (Lineal Foot).	Stone Filling for Under-drains (per Cubic Yard).	Bounds (Each).	Catch-basins (Each).	
Local (Ton).	Trap (Ton).	CLAY.			IRON.								
		Twelve-inch.	Eighteen-inch.	Twenty-four-inch.	Twelve-inch.	Eighteen-inch.	Twenty-four-inch.						
-	\$1 75	\$0 75	-	-	\$2 50	-	-	\$0 25	\$0 50	-	\$1 50	-	1
-	2 30	-	-	-	-	-	-	28	-	-	2 00	-	2
-	2 10	75	-	\$2 00	-	-	-	30	50	-	1 50	-	3
-	1 74	-	-	-	-	-	-	25	49	-	2 00	-	4
\$1 50	-	-	-	-	-	-	-	-	-	\$0 60	-	-	5
-	32 40	460	-	-	-	-	-	25	-	-	2 00	<sup>5</sup> \$25 00/ 25 00	6
1 60	-	75	\$1 75	690	-	-	-	25	45	-	2 00	-	7
-	1 65	65	455	-	-	-	-	25	35	-	1 50	17 33 <sup>1</sup> / <sub>3</sub>	8
-	1 75	860	-	-	1 75	<sup>9</sup> \$1 50	-	25	-	-	1 50	20 00	9
1 40	-	85	-	-	2 10	-	-	25	-	55	2 00	20 00	10
-	-	1250	-	-	<sup>13</sup> 1 25	-	-	-	-	-	2 00	-	11
1570	-	-	-	-	-	-	-	-	-	-	-	-	12
1 55	-	75	1 40	<sup>11</sup> 1 00	2 00	-	-	25	-	40	2 00	-	13
1 45	-	865	-	-	<sup>11</sup> 1 75	-	-	-	-	-	1 50	25 00	14
1 49	-	-	-	2 00	-	-	-	24	-	43	1 50	-	15
1 25	-	1 25	<sup>41</sup> 1 25	-	4 00	-	-	50	-	-	50	35 00	16
-	1 93	70	-	2 50	1 75	-	-	20	-	40	1 50	-	17
3 00	-	460	-	-	-	-	-	25	-	-	1 50	25 00	18
1 38	2 13	75	-	-	-	-	-	25	<sup>16</sup> 30	<sup>171</sup> 10 1 00	2 00	-	19
-	-	75	460	-	-	-	-	-	-	70	2 00	20 00	20
-	-	60	860	<sup>19</sup> 60	2 00	<sup>19</sup> 2 00	<sup>20</sup> \$2 60	30	-	60	3 00	-	21
-	2 15	85	-	-	2 00	-	-	25	-	-	1 50	-	22
1 65	-	75	445	860	-	-	-	25	-	150	1 00	<sup>225</sup> 00/ 25 00	23
-	1 75	-	-	-	-	-	-	-	<sup>21</sup> 50	-	-	-	24
-	32 50	455	-	-	-	-	-	25	-	-	1 50	25 00	25
-	32 25	80	460	-	3 00	-	-	25	-	-	2 00	30 00	26
1 47	-	<sup>865</sup> 75	<sup>450</sup>	<sup>11</sup> 25	<sup>12</sup> 2 00	-	-	25	-	-	1 50	25 00	27
-	-	-	-	-	1 75	-	-	20	45	<sup>251</sup> 10	1 50	-	28
-	2 30	-	-	-	-	-	-	-	-	-	-	-	29
-	<sup>31</sup> 35	65	<sup>11</sup> 20	-	2 00	-	-	25	-	-	2 00	-	30

<sup>13</sup> 6-inch iron.<sup>14</sup> Work paid for at actual cost.<sup>15</sup> Price at crusher.<sup>16</sup> Blind drains.<sup>17</sup> Unscreened broken stone.<sup>18</sup> Gravel.<sup>19</sup> 16-inch clay.<sup>20</sup> 16-inch iron.<sup>21</sup> Cobble-stone gutters.<sup>22</sup> Excavation at bridge.<sup>23</sup> Class D masonry.<sup>24</sup> Class A masonry. <sup>25</sup> Screened gravel.

## SHOWING CONTRACT PRICES ON

	TOWN OR CITY.	Contract Number.	Contractor.	EXCAVATION.			Portland Cement Concrete Masonry.	Shaping (Square Yard).
				All Kinds (Cubic Yard).	Borrow (Cubic Yard).	Ledge (Cubic Yard).		
1	Somerset-Swansea.	712	Coleman Bros., . .	\$0 28	\$0 50	\$2 00	\$6 50	\$0 01
2	Southborough, .	783	Ferranti & Maguire, .	39	-	2 50	9 00	-
3	South Hadley, .	709	Cowles, Chhlds & Dayton.	38	32½	1 50	8 00	03
4	Stoughton, . .	784	Wm. J. McCarthy, .	50	40	1 50	-	02½
5	Sunderland, .	752	Town, . . . . .	40	60	-	-	03
6	Sutton, . . .	726	Town, . . . . .	35	50	1 75	{ 10 00 8 00 }	02
7	Swansea, . .	750	Joseph McCormick, .	50	65	3 00	-	03
8	Swansea, <sup>7</sup> . .	788	Town, . . . . .	-	-	-	-	-
9	Templeton, .	751	Fred E. Ellis, . .	50	70	2 00	8 00	03
10	Tewksbury, .	753	Town, . . . . .	50	50	2 00	7 00	03
11	Townsend, . .	733	Ferranti & Maguire, .	40	45	10	7 50	03
12	Uxbridge, . .	725	T. H. Gill & Co., .	40	44	2 00	5 00	02
13	Ware, . . .	737	Wm. N. Flynt Granite Co.	40	40	2 00	8 00	03
14	Whately, . .	743	Wm. N. Flynt Granite Co.	40	40	-	8 00	03
15	Wenham, . .	761	Town, . . . . .	40	40	1 75	7 00	03
16	Westborough, .	790	Town, . . . . .	39	-	1 75	8 00	-
17	Westminster, .	765	Richmond F. Hudson,	40	50	2 00	13 00	-
18	Weymouth, . .	786	Town, . . . . .	50	50	2 00	8 00	03
19	Wilbraham, .	706	James Cosgrove, .	25	50	2 00	{ 3 00 4 00 }	02½
20	Williamsburg, .	734	Town, . . . . .	40	60	2 00	6 00	-
21	Windsor, . .	773	John W. Polcare, .	55	50	55	8 00	-
22	Worcester, . .	766	Ferranti & Maguire, .	34	-	1 00	7 00	03

<sup>1</sup> 1½-inch clay.<sup>2</sup> Gravel.<sup>3</sup> To be relaid.<sup>4</sup> 6-inch clay.<sup>5</sup> 8-inch clay.<sup>6</sup> Class C masonry.

STATE ROADS DURING 1903 — *Concluded.*

BROKEN STONE.		PIPE CULVERTS (PER LINEAL FOOT).						Fencing (Lineal Foot).	Side Drains (Lineal Foot).	Stone Filling for Under- drains (per Cubic Yard).	Bounds (Each).	Catch-basins (Each).	
Local (Ton).	Trap (Ton).	CLAY.			IRON.								
		Twelve-inch.	Eighteen- inch.	Twenty-four- inch.	Twelve-inch.	Eighteen- inch.	Twenty-four- inch.						
\$1 40	-	\$0 75	\$1 00	-	-	-	-	\$0 25	\$0 75	-	\$2 00	\$50 00	
-	-	65	11 10	-	\$2 00	\$3 50	-	24	-	<sup>2</sup> \$0 54 65	2 00	-	
-	\$1 69	<sup>3</sup> 40 75	<sup>3</sup> 37	-	3 50	-	-	24	59	-	1 50	-	
1 50	-	-	-	-	-	-	-	23	-	-	1 50	-	
-	2 00	50	-	-	-	-	-	-	-	-	1 50	30 00	
1 08	-	-	-	-	-	-	-	25	-	-	1 50	-	
1 60	-	-	-	-	-	-	-	24	-	-	2 50	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	
-	2 00	85	2 00	-	2 00	3 00	-	24	-	1 00	1 50	-	
-	1 90	75	-	-	-	-	-	25	-	-	1 50	-	1
-	1 92	70	-	-	2 25	-	-	25	-	-	1 75	-	1
-	1 98	-	-	-	-	-	-	20	-	<sup>2</sup> 65	1 50	-	1
-	1 75	-	-	-	-	-	-	25	-	-	2 00	-	1
-	1 90	1 00	-	-	-	-	-	30	-	-	2 00	35 00	1
-	1 85	60	<sup>8</sup> 50	<sup>1</sup> \$0 90	1 30	-	-	20	35	-	1 50	25 00	1
-	-	65	-	-	2 00	-	-	24	-	<sup>2</sup> 54	1 75	-	1
-	-	80	-	-	2 00	-	-	25	-	70	2 00	-	1
1 40	-	70	<sup>5</sup> 45	<sup>11</sup> 00 <sup>8</sup> 60	<sup>1</sup> 75	-	-	25	-	<sup>2</sup> 85	1 50	25 00	1
-	1 70	75	1 00	-	-	-	-	20	50	<sup>10</sup> 1 60	2 00	-	1
-	-	-	-	-	-	-	-	25	50	-	1 75	-	2
-	-	-	-	-	-	-	-	35	-	<sup>10</sup> 1 00 35	2 50	-	2
1 39	-	65	-	-	-	-	-	25	-	75	2 00	-	2

<sup>7</sup> 70 cents per lineal foot of road.<sup>8</sup> 10-inch clay.<sup>9</sup> Class D masonry.<sup>10</sup> Rock embankment.

## APPENDIX D.

## STATEMENT OF CLAIMS AGAINST THE COMMISSION.

[As required by section 5, chapter 18 of the Revised Laws.]

NAME.	Residence.	Nature of Claim.	Remarks.
Alvord, Edwin H., <sup>1</sup>	Chester, .	Damages due to construction of State road in Chester, .	Pending.
Bennett, Josiah C., .	Lynn, .	Damages caused by taking of land in Lynn, .	Settled in part.
Crowell, T. H., <sup>1</sup>	Somerville, .	Damages caused by construction of State road in Chatham, .	Pending.
Davis, Charles H., <sup>1</sup>	Somerset, .	Damages caused by construction of State road in Somerset, .	Pending.
Donovan, J. H., <sup>1</sup>	Natick, .	Damages caused by construction of State road in Natick, .	Pending.
Dow, Clara B., <sup>1</sup>	Amesbury, .	Damages due to road construction in Amesbury, .	Pending.
Dow, Granville S., <sup>1</sup>	Marlborough, .	Damages caused by construction of State road in Marlborough, .	Pending.
Fisher, Caroline F., <sup>1</sup>	Amesbury, .	Damages due to construction of State road in Amesbury, .	Pending.
Flanders, Betsey S., <sup>1</sup> <i>et al.</i> , <sup>1</sup>	Natick, .	Damages caused by construction of State road in Natick, .	Pending.
Flanders, Betsey S., <sup>1</sup>	Somerville, .	Damages caused by alleged accident at Saugus, .	Pending.
Griffin, John, <i>et al.</i> , <sup>1</sup>	-	Damages caused by construction of State road at Deerfield, .	Pending.
Hagerty, Hannah, .	Hudson, .	Damages caused by construction of State road in Marlborough, .	Pending.
Hale, Francis J., <sup>1</sup>	Northborough, .	Damages caused by laying out and construction of State road in Northborough, .	Pending.
Hudson Co-operative Bank, <sup>1</sup>			
Loring, John S., <sup>1</sup>			



Lynch, George, <i>et al.</i> , <sup>1</sup>	.	.	Somerset,	.	Damages due to the construction of State road in Somerset, .	.	.	.	Pending.
Murray, John B.,	.	.	Somerville,	.	Damages due to alleged accident on State road in Saugus, .	.	.	.	Pending.
Radford, Harry L.,	.	.	Boston, .	.	Damages due to alleged accident on State road in Leicester, .	.	.	.	Pending.
Richards, John M., <sup>1</sup>	.	.	Quincy, .	.	Damages due to construction of State road in Quincy, .	.	.	.	Pending.
Temple, Theodore, <sup>1</sup>	.	.	Marlborough, .	.	Damages caused by construction of State road in Marlborough, .	.	.	.	Pending.
Thimineur, Joseph, <sup>1</sup>	.	.	Marlborough, .	.	Damages caused by construction of State road in Marlborough, .	.	.	.	Pending.
Waite, Myra J., <sup>1</sup>	.	.	Deerfield, .	.	Damages caused by construction of State road in Deerfield, .	.	.	.	Pending.
Warren, Alice E. M., <sup>1</sup>	.	.	Auburn, .	.	Damages caused by construction of State road in Auburn, .	.	.	.	Pending.
Wellington, Margaret J.,	.	.	Braintree, .	.	Damages caused by construction of State road in Braintree, .	.	.	.	Pending.

<sup>1</sup> The town is defending the action.

## APPENDIX E.

COST PER MILE OF ROAD (SECTIONS COMPLETED DURING THE YEAR 1903).<sup>1</sup>

TOWN OR CITY.	Square Yards.	Miles.	Cost per Mile.
Abington, . . . . .	4,893	.556	\$8,350 80
Agawam, . . . . .	6,115	.695	8,738 53
Andover, . . . . .	5,750	.653	6,873 86
Athol, . . . . .	5,423	.616	7,765 10
Attleborough, <sup>2</sup> . . . . .	3,917	.445	4,845 87
Barre, . . . . .	11,085	1.260	5,878 40
Bedford, . . . . .	4,705	.535	7,486 54
Blackstone, . . . . .	5,063	.575	7,157 65
Brookfield, . . . . .	2,752	.313	12,602 14
Burlington, <sup>3, 4</sup> . . . . .	8,727	.991	9,316 05
Charlton, . . . . .	16,833	1.913	10,641 74
Chelmsford, . . . . .	6,000	.568	8,228 03
Chicopee, <sup>5</sup> . . . . .	7,070	.670	8,094 18
Cohasset, . . . . .	1,568	.178	6,347 36
Dalton, . . . . .	4,212	.479	6,359 04
Deerfield, . . . . .	1,667	.190	8,303 90
Dighton, . . . . .	8,523	.969	6,810 96
Douglas, . . . . .	8,165	.928	7,970 27
Edgartown (1902), . . . . .	3,165	.360	6,987 92
Edgartown (1903), . . . . .	3,167	.360	5,300 39
Essex, . . . . .	2,388	.271	14,603 69
Fitchburg, . . . . .	4,583	.521	10,999 29
Foxborough, . . . . .	7,378	.838	4,697 21
Freetown, . . . . .	15,883	1.805	3,521 12
Great Barrington, <sup>2</sup> . . . . .	5,502	.625	5,515 65
Groton, . . . . .	3,000	.341	9,678 21
Groveland-West Newbury, . . . . .	4,610	.524	12,534 92

<sup>1</sup> The cost of bridges is not included in this table.<sup>3</sup> Two sections.<sup>4</sup> Macadamized for 4,500 feet.<sup>2</sup> Gravel road.<sup>5</sup> Macadam 18 feet in width.

COST PER MILE OF ROAD, ETC. — *Continued.*

TOWN OR CITY.	Square Yards.	Miles.	Cost per Mile.
Hadley (1902), . . . . .	2,337	.278	\$12,976 69
Hadley (1903), . . . . .	6,917	.786	14,707 24
Hancock, . . . . .	5,500	.625	5,153 44
Harwich, . . . . .	14,025	1.594	5,517 42
Haverhill, <sup>1</sup> . . . . .	9,445	1.074	8,634 15
Lunenburg, . . . . .	3,978	.452	12,400 13
Marion, . . . . .	4,333	.492	3,445 12
Marlborough (1902), . . . . .	5,413	.615	7,744 47
Marlborough (1903), . . . . .	9,713	1.104	6,440 33
Marshfield, . . . . .	7,033	.799	6,518 92
Mattapoissett, . . . . .	5,820	.661	4,690 09
Merrimac, . . . . .	4,942	.562	7,536 48
Middleborough (1902), . . . . .	13,200	1.500	1,794 63
Middleborough (1903), . . . . .	24,167	2.746	2,211 86
Millbury, . . . . .	4,478	.508	10,755 10
North Adams, <sup>2</sup> . . . . .	7,453	.605	6,014 13
North Andover, . . . . .	7,777	.884	10,402 40
Orleans, . . . . .	7,067	1.004	2,484 48
Orange, . . . . .	7,748	.880	8,123 08
Pittsfield (1897), <sup>3</sup> . . . . .	6,733	.765	5,144 76
Pittsfield (1902), . . . . .	4,167	.473	7,673 65
Princeton, . . . . .	5,250	.597	9,349 04
Raynham, . . . . .	5,590	.635	8,124 68
Randolph, . . . . .	12,167	1.383	6,256 61
Reading, . . . . .	10,817	1.229	4,860 51
Rehoboth, . . . . .	6,130	.697	3,323 39
Richmond (1902), <sup>4</sup> . . . . .	2,833	.322	4,499 69
Richmond (1903), <sup>4</sup> . . . . .	4,083	.464	5,052 05
Rockland, . . . . .	8,832	1.004	4,522 79
Rockport, . . . . .	2,833	.322	23,202 30
Somerset-Swansea, . . . . .	13,167	1.496	4,295 20
South Hadley, . . . . .	17,167	1.951	4,558 09
Sunderland, . . . . .	4,347	.494	9,399 03
Sutton, . . . . .	4,175	.474	2,924 08
Swansea, . . . . .	4,417	.502	3,623 71
Templeton, . . . . .	5,033	.572	11,416 98

<sup>1</sup> Macadamized for 4,800 feet.<sup>3</sup> 1897 section macadamized.<sup>2</sup> Grading.<sup>4</sup> Gravel road.

COST PER MILE OF ROAD, ETC. — *Concluded.*

TOWN OR CITY.	Square Yards.	Miles.	Cost per Mile.
Townsend, . . . . .	7,500	.852	\$5,473 48
Uxbridge, <sup>1</sup> . . . . .	3,562	.405	12,008 20
Ware, . . . . .	4,250	.483	8,608 60
Wellfleet-Eastham, . . . . .	22,187	2.521	1,210 48
Wenham, . . . . .	5,622	.639	2,888 50
Westford-Littleton, <sup>1</sup> . . . . .	29,823	3.389	2,568 04
Wilbraham, . . . . .	7,348	.835	9,885 47
Windsor, <sup>1</sup> . . . . .	2,288	.325	7,844 61
Totals, . . . . .	513,811	58.177	-
Average cost per mile, . . . . .	-	-	\$6,248 17

<sup>1</sup> Gravel road.

## APPENDIX F.

## MAINTENANCE.

*Table showing the Amounts expended for Repairs and Maintenance and the Cost per Mile per Year on Each Road finished previous to 1903; also the Number of Miles of Road under Maintenance and the Amounts to be assessed upon Municipalities for Maintenance under Chapter 47 of the Revised Laws.*

TOWN OR CITY.	Expended to 1903.	Expended in 1903.	Total.	Total Cost per Mile per Year.	Expended per Mile in 1903.	Length under Maintenance (Miles).	Amount to be assessed on Cities or Towns.
Abington, . . .	\$64 52	\$66 97	\$131 49	\$45 34	\$38 78	1.727	\$66 97
Acton, . . .	359 70	141 95	501 65	39 88	32 04	4.431	141 95
Acushnet, . . .	845 41	141 33	986 74	138 04	59 68	2.368	118 40
Adams, . . .	450 07	13 28	463 35	147 56	23 38	.568	13 28
Agawam, . . .	-	3 19	3 19	21 27	4 59	.695	3 19
Amesbury, . . .	368 60	71 14	439 74	162 87	75 52	.942	47 10
Amherst, . . .	3 88	45 60	49 48	39 27	47 80	.954	45 60
Andover, . . .	1,226 17	174 09	1,400 26	86 54	48 63	3.580	174 09
Ashby, . . .	2,191 22	290 26	2,481 48	109 17	81 28	3.571	178 55
Ashfield, . . .	1,044 99	132 92	1,177 91	144 18	82 66	1.608	80 40
Athol, . . .	4,721 68	186 85	4,908 53	426 83	84 02	2.224	111 20
Attleborough, . . .	246 31	211 02	457 33	93 91	79 60	2.651	132 55
Auburn, . . .	1,456 30	369 28	1,825 58	94 64	91 14	4.052	202 60
Barnstable, . . .	723 58	255 01	978 59	84 14	59 86	4.260	213 00
Barre, . . .	220 76	194 57	415 33	50 59	67 30	2.891	144 55
Becket, . . .	1 13	13 33	14 46	43 82	47 95	.278	13 33
Bedford, . . .	78 60	2 49	81 09	24 43	2 32	1.070	2 49
Belchertown, . . .	186 59	63 20	249 79	102 38	46 06	1.372	63 20
Bellingham, . . .	1 54	3 28	4 82	11 21	8 65	.379	3 28
Beverly, . . .	1,150 40	1,503 98	2,654 38	201 55	748 25	2.010	100 50
Blackstone, . . .	249 33	70 19	319 52	75 72	40 32	1.741	70 19
Bourne, . . .	381 99	22 09	404 08	56 83	15 61	1.415	22 09

Table showing the Amounts expended for Repairs, etc. — Continued.

TOWN OR CITY.	Expended to 1903.	Expended in 1903.	Total.	Total Cost per Mile per Year.	Expended per Mile in 1903.	Length under Maintenance (Miles).	Amount to be assessed on Cities or Towns.
Boxborough, . . .	\$204 59	\$12 09	\$216 68	\$31 40	\$8 09	1.363	\$12 09
Braintree, . . .	4 01	4 88	8 89	5 08	4 60	1.061	4 88
Brewster, . . .	1,929 16	492 45	2,421 61	83 56	63 25	7.786	389 30
Brimfield, . . .	574 39	435 74	1,010 13	78 43	109 87	3.966	198 30
Brockton, . . .	566 19	139 70	705 89	66 91	55 35	2.524	126 20
Brookfield, . . .	426 59	47 85	474 44	71 24	24 51	1.952	47 85
Buckland, . . .	1,632 03	864 09	2,496 12	127 16	246 95	3.499	174 95
Burlington, . . .	-	48 32	48 32	142 12	48 76	.852	42 60
Charlemont, . . .	938 65	2,360 98	3,294 63	815 50	3,070 20	.769	38 45
Charlton, . . .	4 46	16 52	20 98	12 27	8 64	1.913	16 52
Chatham, . . .	308 75	214 67	523 42	136 66	126 42	1.698	84 90
Chelmsford, . . .	447 39	55 97	503 36	90 53	47 89	2.007	55 97
Cheshire, . . .	371 09	204 47	575 56	92 83	78 79	2.595	129 75
Chester, . . .	467 66	440 87	908 53	253 07	285 17	1.546	77 30
Chicopee, . . .	2,649 88	245 43	2,895 31	562 19	154 65	1.587	79 35
Cohasset, . . .	205 84	40 82	246 66	34 69	17 90	2.281	40 82
Colrain, . . .	499 64	120 24	619 88	107 99	65 70	1.830	91 50
Concord, . . .	465 08	98 02	563 10	62 09	49 26	1.990	98 02
Cottage City, . . .	3,327 62	120 10	3,447 72	191 14	50 68	2.370	120 10
Dalton, . . .	2,993 99	388 82	3,382 81	308 63	193 32	2.043	102 15
Dartmouth, . . .	340 33	32 71	373 04	40 81	12 18	2.685	32 71
Deerfield, . . .	1,561 57	1,264 98	2,826 55	211 41	439 53	2.878	143 90
Dennis, . . .	2,198 89	391 37	2,590 26	84 70	62 89	6.223	311 15
Dighton, . . .	31 28	13 19	44 47	55 59	8 44	1.563	13 19
Douglas, . . .	-	108 15	108 15	309 00	116 54	.928	46 40
Dudley, . . .	-	138 56	138 56	223 48	235 65	.588	29 40
Duxbury, . . .	776 38	194 99	971 37	73 64	94 85	2.055	102 75
Eastham, . . .	-	44 61	44 61	193 96	53 33	.778	39 90
Easthampton, . . .	874 90	230 78	1,105 68	87 82	95 48	2.417	120 85
Easton, . . .	40 86	43 63	84 49	35 65	54 47	.801	40 05
Edgartown, . . .	283 98	85 74	369 72	63 42	35 49	2.416	85 74
Erving, . . .	497 10	404 71	901 81	124 22	198 00	2.044	102 20
Essex, . . .	-	3 04	3 04	33 78	8 71	.349	3 04
Fairhaven, . . .	474 66	84 86	559 52	47 22	58 56	1.449	72 45

*Table showing the Amounts expended for Repairs, etc. — Continued.*

TOWN OR CITY.	Expended to 1903.	Expended in 1903.	Total.	Total Cost per Mile per Year.	Expended per Mile in 1903.	Length under Maintenance (Miles).	Amount to be assessed on Cities or Towns.
Fitchburg, . . .	\$2,381 83	\$226 96	\$2,608 79	\$194 83	\$71 64	3.168	\$158 40
Foxborough, . . .	3 97	12 19	16 16	8 12	6 71	1.816	12 19
Freetown, . . .	-	74 80	74 80	90 12	23 43	3.193	74 80
Gardner, . . .	1,145 55	369 18	1,514 73	101 86	110 01	3.356	167 80
Gloucester, . . .	1,232 77	240 89	1,473 66	91 76	96 98	2.484	124 20
Goshen, . . .	2,026 11	116 17	2,142 28	143 49	60 92	1.907	95 35
Grafton, . . .	421 49	128 58	550 07	77 04	82 79	1.553	77 65
Granby, . . .	742 59	346 23	1,088 82	192 37	335 49	1.032	51 60
Great Barrington, .	4,099 87	1,261 13	5,361 00	277 63	369 72	3.411	170 55
Greenfield, . . .	235 75	71 71	307 46	82 87	54 08	1.326	66 30
Groton, . . .	5 60	126 04	131 64	96 79	91 20	1.382	69 10
Groveland, . . .	30 02	56 31	86 33	50 84	39 10	1.440	56 31
Hadley, . . .	2,568 11	486 57	3,354 68	197 68	161 97	3.004	150 20
Hamilton, . . .	301 45	57 17	358 62	74 10	39 67	1.441	57 17
Hancock, . . .	3,804 53	653 35	4,457 88	251 15	202 15	3.232	161 60
Hardwick, . . .	186 55	138 22	324 77	104 09	168 77	.819	40 95
Harvard, . . .	32 22	31 05	63 27	38 82	44 23	.702	31 05
Harwich, . . .	534 72	219 75	754 47	81 65	62 71	3.504	175 20
Hatfield, . . .	7 59	60 41	68 00	115 25	155 70	.388	19 40
Haverhill, . . .	5,764 40	557 90	6,322 30	747 32	177 22	3.148	157 40
Hingham, . . .	918 00	125 72	1,043 72	54 33	47 32	2.658	125 72
Hinsdale, . . .	2 76	37 27	40 03	42 59	47 39	.681	34 05
Holbrook, . . .	385 75	144 87	530 62	61 70	82 74	1.751	87 55
Holden, . . .	1,220 00	416 75	1,636 75	67 36	110 81	3.761	188 05
Huntington, . . .	1,704 12	2,422 00	4,126 12	600 60	2,189 16	1.015	50 75
Lakeville, . . .	8 04	163 18	171 22	40 29	45 71	3.570	163 18
Lancaster, . . .	5 07	40 28	45 35	31 06	32 25	.910	40 28
Lawrence, . . .	1,301 26	70 91	1,372 17	802 44	265 58	.267	13 35
Lee, . . .	5,300 46	1,270 13	6,570 59	360 43	391 65	3.243	162 15
Leicester, . . .	12,414 71	337 96	12,752 67	454 97	69 48	4.864	243 20
Lenox, . . .	1,248 26	394 54	1,642 80	271 99	172 97	2.281	114 05
Leominster, . . .	10 24	169 58	179 82	65 87	77 86	2.178	108 90
Lexington, . . .	930 30	140 80	1,071 10	46 67	32 81	4.291	140 80
Lincoln, . . .	620 50	58 23	678 73	48 10	26 27	2.060	58 23

Table showing the Amounts expended for Repairs, etc. — Continued.

TOWN OR CITY.	Expended to 1903.	Expended in 1903.	Total.	Total Cost per Mile per Year.	Expended per Mile in 1903.	Length under Maintenance (Miles).	Amount to be assessed on Cities or Towns.
Littleton, . . .	-	\$30 42	\$30 42	\$34 97	\$21 42	1.420	\$30 42
Lowell (north), .	\$305 58	38 47	344 05	} 493 13	42 14	2.303	97 04
Lowell (south), .	6,131 41	58 57	6,189 98				
Lunenburg, . . .	808 34	130 57	938 91	123 54	47 97	2.722	130 57
Mansfield, . . .	17 92	3 32	21 24	18 63	4 61	.720	3 32
Marion, . . .	653 51	41 60	695 11	36 03	12 11	3.435	41 60
Marlborough, . .	364 30	61 88	426 18	42 24	18 06	3.426	61 88
Marshfield, . . .	494 98	217 48	712 46	56 28	68 09	3.194	159 70
Mattapoisett, . .	526 97	94 06	621 03	47 30	36 97	2.544	94 06
Merrimac, . . .	435 95	90 26	526 21	83 66	57 87	1.560	78 00
Methuen, . . .	658 85	2,418 14	3,076 99	310 49	920 49	2.627	131 35
Middleborough, .	612 93	163 76	776 69	38 95	38 43	4.261	163 76
Millbury, . . .	8 74	52 74	61 48	36 59	31 58	1.670	52 74
Milton, . . .	1,483 36	377 34	1,860 70	741 31	433 23	.871	43 55
Monson, . . .	689 45	59 07	748 52	98 88	57 13	1.034	51 70
Montague, . . .	504 55	72 37	576 92	77 65	44 34	1.632	72 37
Nantucket, . . .	2,210 87	358 78	2,569 65	74 33	61 01	5.881	294 05
Natick, . . .	35 95	9 69	45 64	18 48	8 54	1.135	9 69
New Braintree, .	29 74	17 21	46 95	51 59	98 91	.174	8 70
Newbury, . . .	127 99	59 95	187 94	34 42	22 44	2.671	59 95
Newburyport, . .	785 00	125 19	910 19	99 26	71 37	1.754	87 70
Newton, . . .	4 19	8 92	13 11	6 10	8 64	1.032	8 92
Norfolk, . . .	387 35	13 63	400 98	39 51	9 37	1.454	13 63
North Adams, . .	2,593 73	888 73	3,482 46	222 81	221 74	3.781	189 05
North Andover, .	221 08	204 83	425 91	143 89	122 29	1.675	83 75
Northampton, . .	786 61	391 65	1,178 26	118 78	232 57	1.684	84 20
North Attleborough,	1,776 11	113 00	1,889 11	77 26	31 42	3.597	113 00
Northborough, . .	295 67	47 22	342 89	31 90	14 99	3.150	47 22
Northfield, . . .	-	197 87	197 87	157 83	170 72	1.159	57 95
North Reading, .	165 42	27 99	193 41	29 26	15 90	1.761	27 99
Norwood, . . .	680 74	92 08	772 82	61 92	44 92	2.050	92 08
Orange, . . .	1,573 81	224 23	1,798 04	149 85	57 66	3.889	194 45
Orleans, . . .	98 63	69 86	168 49	57 70	55 93	1.249	62 45
Palmer, . . .	296 58	154 65	451 23	57 78	61 14	2.513	125 65



Table showing the Amounts expended for Repairs, etc. — Continued.

TOWN OR CITY.	Expended to 1903.	Expended in 1903.	Total.	Total Cost per Mile per Year.	Expended per Mile in 1903.	Length under Maintenance (Miles).	Amount to be assessed on Cities or Towns.
Paxton, . . .	\$4,548 02	\$1,682 30	\$6,230 32	\$261 37	\$467 70	3.597	\$179 85
Phillipston, . .	448 69	628 30	1,076 99	186 33	518 40	1.212	60 60
Pittsfield, . . .	2,670 99	574 00	3,244 99	195 60	182 16	3.151	157 55
Plymouth, . . .	2,924 01	146 05	3,070 06	117 18	34 20	4.251	146 05
Princeton, . . .	203 45	246 77	450 22	103 75	155 10	1.591	79 55
Provincetown, . .	47 75	21 10	68 85	114 75	96 79	.218	10 90
Quincy, . . .	26 88	60 26	87 14	39 61	56 80	1.061	53 05
Randolph, . . .	-	107 35	107 35	268 38	77 62	1.383	69 15
Raynham, . . .	14 92	11 55	26 47	20 36	7 82	1.477	11 55
Reading, . . .	318 49	108 77	427 26	109 55	47 31	2.299	108 77
Rehoboth, . . .	630 80	78 40	709 20	59 74	41 39	1.894	78 40
Revere (east), . .	525 89	105 97	631 86	209 23	197 41	1.248	62 40
Revere (west), . .	1,253 88	140 40	1,394 28	593 31			
Richmond, . . .	800 26	245 27	1,045 53	142 64	127 61	1.922	96 10
Rockport, . . .	-	35 08	35 08	120 97	108 94	.322	16 10
Russell, . . .	4,453 84	3,589 42	8,043 26	201 39	539 36	6.655	332 75
Salem, . . .	53	59	1 12	3 86	4 44	.133	59
Sandwich, . . .	1,141 96	146 42	1,288 38	107 47	51 89	2.822	141 10
Saugus, . . .	1,191 58	162 69	1,354 27	241 83	101 74	1.599	79 95
Scituate, . . .	739 07	93 93	833 00	86 23	53 10	1.769	88 45
Seekonk, . . .	38 61	32 55	71 16	25 88	20 71	1.572	32 55
Shelburne, . . .	1,645 88	336 11	1,981 99	126 96	155 68	2.159	107 95
Shrewsbury, . . .	4,946 05	328 55	5,274 60	44 17	84 35	3.895	194 75
Somerset, . . .	722 32	171 65	893 97	42 96	30 16	5.692	171 65
Southbridge, . . .	-	7 86	7 86	8 64	8 65	.909	7 86
South Hadley, . .	2,100 98	888 53	2,989 51	241 87	202 81	4.381	219 05
Spencer, . . .	123 97	62 88	186 85	43 76	39 28	1.601	62 88
Sterling, . . .	468 74	160 59	629 33	95 64	123 93	1.296	64 80
Stoneham, . . .	418 21	125 19	543 40	95 84	79 13	1.582	79 10
Stoughton, . . .	16 96	23 46	40 42	40 42	30 99	.757	23 46
Sturbridge, . . .	220 26	49 75	270 01	84 38	84 90	.586	29 30
Sudbury, . . .	335 91	166 19	502 10	42 92	33 99	4.890	166 19
Sunderland, . . .	22 18	5 78	27 96	25 42	30 74	.188	5 78
Sutton, . . .	105 65	205 95	311 60	77 71	106 54	1.933	96 65

Table showing the Amounts expended for Repairs, etc. — Continued.

TOWN OR CITY.	Expended to 1903.	Expended in 1903.	Total.	Total Cost per Mile per Year.	Expended per Mile in 1903.	Length under Maintenance (Miles).	Amount to be assessed on Cycles or Towns.
Swampscott, . . .	\$815 23	\$480 16	\$1,295 39	\$219 40	\$322 26	1.490	\$74 50
Swansea, . . .	-	3 74	3 74	26 71	4 60	.813	3 74
Taunton, . . .	1,113 92	95 15	1,209 07	84 37	32 44	2.933	95 15
Templeton, . . .	222 44	93 30	315 74	86 98	46 60	2.002	93 30
Tewksbury, . . .	109 85	109 61	219 46	63 43	58 46	1.875	93 75
Tisbury, . . .	1,053 47	97 30	1,150 77	71 57	50 39	1.931	96 55
Townsend, . . .	595 05	231 14	826 19	59 69	54 89	4.211	210 55
Truro, . . .	655 10	269 27	924 37	83 20	113 95	2.363	118 15
Tyngsborough, . .	1,109 26	50 73	1,159 99	61 28	17 24	2.942	50 73
Uxbridge, . . .	420 33	60 28	480 61	65 75	27 70	2.176	60 28
Wales, . . .	-	52 34	52 34	37 65	50 33	1.040	52 00
Walpole, . . .	1,452 51	60 49	1,513 00	58 17	13 34	4.536	60 49
Ware, . . .	392 59	225 12	617 71	87 87	98 65	2.282	114 10
Wareham, . . .	349 04	121 68	470 72	44 53	48 00	2.535	121 68
Warren, . . .	1,013 25	303 77	1,317 02	88 93	92 05	3.300	165 00
Watertown, . . .	1,172 46	310 78	1,483 24	243 55	365 62	.850	42 50
Wayland, . . .	351 02	153 92	504 94	60 30	67 72	2.273	113 65
Wellesley, . . .	26 89	10 03	36 92	14 42	8 53	1.176	10 03
Wellfleet, . . .	-	43 01	43 01	84 33	24 68	1.742	43 01
Wenham, . . .	247 14	60 36	307 50	64 60	54 04	1.117	55 85
Westborough, . . .	160 08	64 29	224 37	57 38	92 24	.714	35 70
West Boylston, . .	632 82	204 34	837 16	106 51	131 58	1.553	77 65
West Bridgewater, .	92 99	175 52	268 51	57 87	64 06	2.740	137 00
West Brookfield, .	107 39	95 54	202 93	41 16	57 66	1.657	82 85
Westfield, . . .	2,933 03	450 07	3,383 10	123 11	77 49	5.808	290 40
Westford, . . .	-	42 78	42 78	17 46	17 48	2.447	42 78
Westminster, . . .	1,372 99	359 58	1,732 57	94 43	120 14	2.993	149 65
West Newbury, . .	2,315 90	961 73	3,277 63	221 91	430 30	2.235	111 75
Weston, . . .	503 23	206 06	709 29	56 29	65 37	3.152	157 60
Westport, . . .	2,813 17	1,934 15	4,747 32	165 64	457 02	4.254	212 70
West Springfield, .	934 51	80 17	1,014 68	124 50	69 53	1.153	57 65
West Tisbury, . . .	760 38	143 20	903 58	48 84	50 40	2.841	142 05
Westwood, . . .	334 50	11 83	346 33	98 95	11 30	1.047	11 83
Weymouth, . . .	868 55	38 55	907 10	72 45	19 30	1.997	38 55

*Table showing the Amounts expended for Repairs, etc. — Concluded.*

TOWN OR CITY.	Expended to 1903.	Expended in 1903.	Total.	Total Cost per Mile per Year.	Expended per Mile in 1903.	Length under Maintenance (Miles).	Amount to be assessed on Cities or Towns.
Whately, . . .	\$43 43	\$79 50	\$122 93	\$31 60	\$44 09	1.803	\$79 50
Whitman, . . .	640 43	123 10	763 53	58 78	72 54	1.697	84 85
Wilbraham, . .	908 76	130 74	1,039 50	69 81	36 01	3.629	130 74
Williamsburg, .	779 25	111 27	890 52	94 99	52 56	2.117	105 85
Williamstown, .	935 53	412 43	1,347 96	115 90	211 39	1.951	97 55
Winchester, . .	727 70	218 09	945 79	136 23	111 73	1.952	97 60
Windsor, . . .	43 12	142 45	185 57	94 20	214 86	.663	33 15
Woburn, . . .	144 96	213 85	363 84	102 20	107 66	2.033	101 65
Worcester, . .	1,893 76	3,245 18	5,138 94	377 86	1,269 63	2.556	127 80
Wrentham, . .	933 37	110 81	1,044 18	37 21	18 79	5.895	110 81
Yarmouth (north), .	1,547 14	245 10	1,792 24	66 77	65 96	3.716	} 439 90
Yarmouth (south), .	2,401 22	383 60	2,784 82	84 08	75 48	5.082	
Totals, . . .	\$187,760 12	\$55,082 53	\$242,842 65	-	-	448.773	\$18,910 61

## APPENDIX G.

STATEMENT SHOWING THE NUMBER OF PETITIONS RECEIVED AND THE LENGTH OF WAY PETITIONED FOR, THE LAY-OUTS MADE AND THEIR LENGTH AND DISTRIBUTION, IN THE VARIOUS COUNTIES OF THE COMMONWEALTH.

COUNTIES.	PETITIONS RECEIVED.				PETITIONS SITUATED IN —			LAY-OUTS MADE IN —			Number of Lay-outs.
	County.	City.	Town.	Total.	Cities.	Towns.	Total.	Cities.	Towns.	Total.	
Barnstable, . . . .	1	1	37	37	1	15	15	1	13	13	60
Berkshire, . . . .	15	5	39	59	2	24	26	2	12	14	56
Bristol, . . . . .	2	5	32	39	2	17	19	1	15	16	62
Dukes, . . . . .	2	—	5	7	1	5	5	1	4	4	18
Essex, . . . . .	12	16	45	63	7	25	32	7	14	21	62
Franklin, . . . . .	1	—	47	48	1	16	16	1	13	13	54
Hampden, . . . . .	4	2	21	27	2	17	19	1	10	11	53
Hampshire, . . . .	1	4	40	45	1	17	18	1	11	12	50
Middlesex, . . . .	11	12	78	101	6	42	48	4	25	29	108
Nantucket, . . . .	—	—	1	1	—	1	1	—	1	1	12
Norfolk, . . . . .	1	3	38	42	1	23	24	1	16	17	58
Plymouth, . . . . .	—	4	43	47	1	24	25	1	14	15	73
Suffolk, . . . . .	—	1	6	7	1	2	3	1	1	2	5
Worcester, . . . .	—	7	116	123	2	54	56	2	37	39	157
Totals, . . . . .	39	59	548	646	25	282	307	21	186	207	828

NUMBER OF PETITIONS RECEIVED, ETC. — *Concluded.*

COUNTIES.	LENGTHS PETITIONED FOR.		LENGTHS LAID OUT.					
	Feet.	Miles.	1894-1902.		1903.		TOTAL	
			Feet.	Miles.	Feet.	Miles.	Feet.	Miles.
Barnstable, . . . .	634,511	120.17	213,638	40.46	36,762	6.96	250,400	47.43
Berkshire, . . . .	608,785	115.30	151,421	28.68	13,008	2.46	164,429	31.14
Bristol, . . . . .	619,700	117.37	167,944	31.85	49,040	9.29	216,984	41.14
Dukes, . . . . .	121,043	22.92	48,588	9.20	1,900	.36	50,488	9.56
Essex, . . . . .	906,050	171.60	171,542	32.49	22,124	4.19	193,666	36.68
Franklin, . . . . .	540,339	102.34	126,171	23.90	14,657	2.78	140,828	26.67
Hampden, . . . . .	513,833	97.32	150,375	28.48	10,045	1.90	160,420	30.38
Hampshire, . . . .	466,008	88.26	106,121	20.10	22,762	4.31	128,883	24.41
Middlesex, . . . .	1,385,451	262.40	332,994	63.07	61,961	11.74	394,955	74.80
Nantucket, . . . .	34,185	6.47	31,060	5.88	3,151	.60	34,211	6.48
Norfolk, . . . . .	550,165	104.20	156,686	29.67	15,503	2.94	172,189	32.61
Plymouth, . . . . .	806,316	152.71	208,244	39.44	78,474	14.86	286,718	54.30
Suffolk, . . . . .	56,375	10.68	9,633	1.82	-	-	9,633	1.83
Worcester, . . . .	1,539,235	291.52	400,523	75.86	62,218	11.78	462,741	87.64
Totals, . . . . .	8,781,996	1,663.26	2,274,940	430.90	391,605	74.17	2,666,545	505.07

## APPENDIX H.

## SHOWING THE WORK DONE UNDER THE "SMALL TOWN" ACT SINCE ITS PASSAGE IN 1900.

[Section 17, chapter 47, Revised Laws.]

TOWNS.	ALLOTMENTS. <sup>1</sup>			LENGTHS BUILT (FEET).			Types of Roads.
	Previous to 1903.	In 1903.	Total to Dec 31, 1903.	Previous to 1903.	In 1903.	Total to Dec. 31, 1903.	
<i>Barnstable County.</i>							
Eastham, . . . . .	\$196 00	-	\$196 00	1,150	-	1,150	Graded only.
Wellfleet, . . . . .	1,653 00	-	1,653 00	2,250	-	2,250	Broken stone and clay.
	\$1,849 00	-	\$1,849 00	3,400	-	3,400	
<i>Berkshire County.</i>							
Alford, . . . . .	\$333 00	\$168 00	\$501 00	1,522	600	2,122	Gravel.
Egremont, . . . . .	840 00	-	840 00	2,000	-	2,000	Gravel.
Florida, . . . . .	800 00	416 00	1,216 00	800	1,700	2,500	Grading and gravel.
Lanesborough, . . . . .	450 00	472 00	922 00	1,800	814	2,614	Gravel.
Monterey, . . . . .	620 00	348 00	968 00	4,500	2,500	7,000	Gravel.
Mount Washington, . . . . .	342 00	-	342 00	-	-	-	Bridge repairs.
New Ashford, . . . . .	205 00	-	205 00	1,100	-	1,100	Gravel road and culvert repairs.
New Marlborough, . . . . .	2,248 00	-	2,248 00	9,700	-	9,700	Gravel.

<sup>1</sup> In many instances the towns appropriated sums in addition to the allotments of the commission, thus making it possible to improve a greater length of road. The lengths shown as built represent the total length improved with all the money available.

## WORK DONE UNDER THE "SMALL TOWN" ACT — Continued.

TOWNS.	ALLOTMENTS. <sup>1</sup>			LENGTHS BUILT (FEET).			Types of Roads.
	Previous to 1903.	In 1903.	Total to Dec. 31, 1903.	Previous to 1903.	In 1903.	Total to Dec. 31, 1903.	
<i>Berkshire County — Concluded.</i>							
Otis, . . . . .	\$816 00	\$456 00	\$1,272 00	2,800	1,200	4,000	Grading, gravelling and bridge repairs.
Peru, . . . . .	519 00	264 00	783 00	1,565	2,320	4,765	Gravel.
Sandisfield, . . . . .	1,240 00	640 00	1,880 00	2,640	2,000	4,640	Macadam.
Savoy, . . . . .	1,156 00	592 00	1,748 00	2,800	1,700	4,500	Gravel.
Sheffield, . . . . .	2,024 00	-	2,024 00	4,500	-	4,500	Gravel.
Tyringham, . . . . .	570 00	336 00	906 00	1,700	-	1,700	Graded only.
Washington, . . . . .	764 00	512 00	1,276 00	3,000	820	3,820	Grading and gravel.
West Stockbridge, . . . . .	1,090 00	642 00	1,732 00	2,200	2,000	4,200	Gravel.
	\$14,017 00	\$4,846 00	\$18,863 00	42,627	16,534	59,161	
<i>Bristol County.</i>							
Norton, . . . . .	\$2,200 00	-	\$2,200 00	3,750	-	3,750	Macadam.
<i>Essex County.</i>							
Danvers, . . . . .	\$3,000 00	-	\$3,000 00	4,000	-	4,000	Gravel.
Georgetown, . . . . .	400 00	\$400 00	800 00	-	-	-	Gravel.
Middleton, . . . . .	808 00	-	808 00	2,100	-	2,100	Gravel.
Salsbury, . . . . .	968 00	980 00	1,948 00	1,050	-	1,050	Macadam.
Topsfield, . . . . .	1,740 00	-	1,740 00	6,225	-	6,225	Gravel.
	\$6,916 00	\$1,380 00	\$8,296 00	13,375	-	13,375	

*Franklin County.*

Bernardston, . . . . .	\$265 00	\$272 00	\$537 00	1,600	2,100	3,700	Gravel.
Conway, . . . . .	1,008 00	1,000 00	2,008 00	-	3,500	3,500	Gravel.
Gill, . . . . .	430 00	5 432 00	862 00	3,100	-	3,100	Gravel.
Hawley, . . . . .	460 00	5 493 00	953 00	2,000	-	2,000	Grading and gravel.
Heath, . . . . .	695 00	336 00	1,031 00	-	7 2,250	2,250	Gravel.
Leverett, . . . . .	468 00	588 00	1,056 00	-	8 2,150	2,150	Gravel.
Leyden, . . . . .	405 00	432 00	837 00	2,000	2,000	4,000	Gravel.
Monroe, . . . . .	-	5 448 00	448 00	-	-	-	Gravel.
New Salem, . . . . .	924 00	-	924 00	-	9 1,980	1,980	Gravel.
Rowe, . . . . .	415 00	416 00	831 00	1,800	950	2,750	Grading and gravel.
Shutesbury, . . . . .	5 262 00	5 286 00	548 00	-	-	-	Gravel.
Warwick, . . . . .	-	3 644 00	644 00	-	-	-	-
Wendell, . . . . .	10 1,224 00	3 650 00	1,874 00	1,200	-	1,200	Graded only.
	\$6,556 00	\$5,997 00	\$12,553 00	11,700	14,930	26,630	
Blandford, . . . . .	\$1,800 00	\$840 00	\$2,640 00	4,800	2,230	7,030	Grading and gravel.
East Longmeadow, . . . . .	680 00	-	680 00	2,850	-	2,850	Gravel.
Granville, . . . . .	800 00	5 1,000 00	1,800 00	4,000	-	4,000	Grading and gravel.

<sup>1</sup> In many instances the towns appropriated sums in addition to the allotments of the commission, thus making it possible to improve a greater length of road. The lengths shown as built represent the total length improved with all the money available.

<sup>2</sup> Includes 2,500 feet built with allotment made previous to 1903.

<sup>3</sup> Work not yet begun.

<sup>4</sup> Laid out as a State highway in 1903.

<sup>5</sup> Work begun but not completed.

<sup>6</sup> The town appropriated an equal amount.

<sup>7</sup> Includes 1,350 feet built with allotment made previous to 1903.

<sup>8</sup> Includes 850 feet built with allotment made previous to 1903.

<sup>9</sup> Work done with allotment made previous to 1903.

<sup>10</sup> Includes two allotments. Work under second allotment not yet completed.

*Hampden County.*

Blandford, . . . . .							
East Longmeadow, . . . . .							
Granville, . . . . .							

## WORK DONE UNDER THE "SMALL TOWN" ACT—Continued.

TOWNS.	ALLOTMENTS. <sup>1</sup>			LENGTHS BUILT (FEET).			Types of Roads.
	Previous to 1903.	In 1903.	Total to Dec. 31, 1903.	Previous to 1903.	In 1903.	Total to Dec. 31, 1903.	
<i>Hampden County—Concluded.</i>							
Hampden, . . . . .	\$340 00	2 \$412 00	\$752 00	5,937	-	5,937	Gravel.
Montgomery, . . . . .	400 00	3 200 00	600 00	-	4 650	650	Gravel.
Tolland, . . . . .	748 00	3 413 00	1,161 00	800	4 1,500	2,300	Graded only.
	\$4,768 00	\$2,865 00	\$7,633 00	13,387	4,380	22,767	
<i>Hampshire County.</i>							
Chesterfield, . . . . .	\$1,020 00	-	\$1,020 00	750	-	750	Gravel.
Cummington, . . . . .	1,004 00	\$480 00	1,484 00	3,200	1,200	4,400	Gravel.
Greenwich, . . . . .	-	3 240 00	240 00	-	-	-	-
Middlefield, . . . . .	5 800 00	-	800 00	1,800	-	1,800	Gravel.
Pelham, . . . . .	772 00	2 400 00	1,172 00	-	4 1,650	1,650	Gravel.
Plainfield, . . . . .	620 00	340 00	960 00	1,200	683	1,883	Gravel.
Prescott, . . . . .	636 00	2 358 00	994 00	1,100	-	1,100	Grading and gravel.
Westhampton, . . . . .	767 00	-	767 00	1,300	-	1,300	Gravel.
Worthington, . . . . .	1,255 00	718 00	2,003 00	2,400	1,200	3,600	Gravel.
	\$6,904 00	\$2,556 00	\$9,440 00	11,750	4,733	16,483	
<i>Middlesex County.</i>							
Billerica, . . . . .	2 \$2,240 00	2 \$1,244 00	4 \$3,484 00	-	-	-	Macadam.
Carlisle, . . . . .	-	3 456 00	456 00	-	-	-	-



Dunstable,	.	.	.	.	.	325 00	-	325 00	2,100	-	2,100	Gravel.
Hudson,	.	.	.	.	.	3,000 00	-	3,000 00	10,857	-	10,857	Graded only.
Maynard,	.	.	.	.	.	7 2,144 00	<sup>6</sup> 1,144 00	3,288 00	4,250	2,440	6,690	Grading, macadam and bridge repairs.
Sherborn,	.	.	.	.	.	-	<sup>2</sup> 892 00	892 00	-	-	-	Gravel.
Shirley,	.	.	.	.	.	526 00	612 00	1,138 00	-	3,800	3,800	Gravel.
Stow,	.	.	.	.	.	1,033 00	<sup>2</sup> 772 00	1,805 00	3,900	-	3,900	Gravel.
Westford,	.	.	.	.	.	<sup>8</sup> 2,366 30	-	2,366 30	5,400	-	<sup>9</sup> 5,400	Gravel.
<i>Norfolk County.</i>												
Avon,	.	.	.	.	.	\$903 00	-	\$903 00	5,280	-	5,280	Gravel.
Bellingham,	.	.	.	.	.	1,412 00	-	1,412 00	2,750	-	2,750	Macadam.
Medway,	.	.	.	.	.	980 00	-	980 00	2,800	-	2,800	Macadam.
Millis,	.	.	.	.	.	-	<sup>3</sup> \$488 00	488 00	-	-	-	-
<i>Plymouth County.</i>												
Carver,	.	.	.	.	.	\$3,265 00	\$488 00	\$3,753 00	10,830	-	10,830	Macadam.
East Bridgewater,	.	.	.	.	.	<sup>10</sup> \$1,636 00	<sup>6</sup> \$1,000 00	\$2,636 00	2,605	<sup>11</sup> 5,880	8,485	Gravel.
Halifax,	.	.	.	.	.	<sup>6</sup> 1,200 00	<sup>6</sup> 700 00	1,900 00	5,000	1,250	6,250	Macadam.
Hanover,	.	.	.	.	.	658 00	-	658 00	2,460	-	2,460	-
						-	<sup>3</sup> 2,368 00	<sup>6</sup> 2,368 00	-	-	-	-

<sup>1</sup> In many instances the towns appropriated sums in addition to the allotments of the commission, thus making it possible to improve a greater length of road. The lengths shown as built represent the total length improved with all the money available.

<sup>2</sup> Work begun but not completed.

<sup>3</sup> Work not yet begun.

<sup>4</sup> Work done with allotment made previous to 1903.

<sup>5</sup> Includes two allotments. Work under second allotment not yet begun.

<sup>6</sup> The town appropriated an equal amount.

<sup>7</sup> Includes two allotments. The town appropriated \$1,000, equal to the second allotment.

<sup>8</sup> Includes two allotments. The town appropriated \$966.30, equal to the second allotment.

<sup>9</sup> Laid out as a State highway in 1903.

<sup>10</sup> Includes two allotments. The town appropriated \$896, equal to the second allotment.

<sup>11</sup> Includes 2,600 feet built with allotment made previous to 1903.

## WORK DONE UNDER THE "SMALL TOWN" ACT—Concluded.

TOWNS.	ALLOTMENTS. <sup>1</sup>			LENGTHS BUILT (FEET).			Types of Roads.
	Previous to 1903.	In 1903.	Total to Dec. 31, 1903.	Previous to 1903.	In 1903.	Total to Dec. 31, 1903.	
<i>Plymouth County — Concluded.</i>							
Hanson, . . . . .	\$2,300 00	-	\$2,300 00	1,354	2 3,000	4,354	Macadam.
Lakeville, . . . . .	700 00	-	700 00	2,640	-	2,640	Macadam.
Norwell, . . . . .	-	3 \$1,000 00	1,000 00	-	5,280	5,280	Gravel.
Pembroke, . . . . .	1,748 00	4 1,100 00	2,848 00	13,100	7,371	20,471	Gravel.
Plympton, . . . . .	710 00	360 00	1,070 00	4,064	2,784	6,848	Gravel.
Rochester, . . . . .	3,000 00	1,500 00	4,500 00	15,840	3,187	5 19,027	Macadam.
	\$12,012 00	\$8,028 00	\$20,040 00	47,063	28,752	75,815	
<i>Worcester County.</i>							
Ashburnham, . . . . .	\$1,004 00	-	\$1,004 00	1,160	-	1,160	Gravel.
Berlin, . . . . .	648 00	\$584 00	1,232 00	1,475	1,400	2,875	Gravel.
Bolton, . . . . .	1,050 00	-	1,050 00	5,500	-	5,500	Gravel.
Boylston, . . . . .	-	6 520 00	520 00	-	-	-	-
Dana, . . . . .	769 00	-	769 00	-	2 2,900	2,900	Gravel.
Hubbardston, . . . . .	-	6 720 00	720 00	-	-	-	-
Mendon, . . . . .	660 00	4 636 00	1,296 00	3,500	-	3,500	Gravel.

Oakham, . . . . .	896 00	-	896 00	3,300	Gravel.
Petersham, . . . . .	6 960 00	6 980 00	1,940 00	-	-
Rutland, . . . . .	1,148 00	4 656 00	1,804 00	1,131	Gravel and macadam.
Winchendon, . . . . .	-	4 1,000 00	3 1,000 00	2,300	Gravel.
	\$7,135 00	\$5,096 00	\$12,231 00	6,600	22,666

<sup>1</sup> In many instances the towns appropriated sums in addition to the allotments of the commission, thus making it possible to improve a greater length of road. The lengths shown as built represent the total length improved with all the money available.

<sup>4</sup> Work begun but not completed.

<sup>5</sup> Laid out as a State highway in 1903.

<sup>6</sup> Work not yet begun.

<sup>2</sup> Work done with allotment made previous to 1903.

<sup>3</sup> The town appropriated an equal amount.

## SUMMARY.

COUNTIES.	ALLOTMENTS.			LENGTHS BUILT (FEET).		
	Previous to 1903.	In 1903.	Total to Dec. 31, 1903.	Previous to 1903.	In 1903.	Total to Dec. 31, 1903.
Barnstable, .	\$1,849 00	-	\$1,849 00	3,400	-	3,400
Berkshire, .	14,017 00	\$4,846 00	18,863 00	42,627	16,534	59,161
Bristol, .	2,200 00	-	2,200 00	3,750	-	3,750
Essex, .	6,016 00	1,380 00	8,296 00	13,375	-	13,375
Franklin, .	6,556 00	5,997 00	12,553 00	11,700	14,930	26,630
Hampden, .	4,768 00	2,865 00	7,633 00	18,387	4,380	22,767
Hampshire, .	6,904 00	2,536 00	9,440 00	11,750	4,733	16,483
Middlesex, .	11,634 30	5,120 00	16,754 30	26,507	6,240	32,747
Norfolk, .	3,295 00	488 00	3,783 00	10,830	-	10,830
Plymouth, .	12,012 00	8,028 00	20,040 00	47,063	28,752	75,815
Worcester, .	7,135 00	5,096 00	12,231 00	16,065	6,600	22,666
Totals, .	\$77,286 30	\$36,356 00	\$113,642 30	205,455	82,160	287,624

## APPENDIX I.

## APPROPRIATIONS.

*Appropriations for the Construction and Repair of State Highways.*

1894, chapter 497, section 8,	. . . . .	\$300,000 00
1895, chapter 347, section 3,	. . . . .	400,000 00
1896, chapter 481, section 3,	. . . . .	600,000 00
1897, chapter 340, section 1,	. . . . .	800,000 00
1898, chapter 539, section 1,	. . . . .	400,000 00
1899, chapter 396, section 1,	. . . . .	500,000 00
1900, chapter 442, section 1,	. . . . .	500,000 00
1901, chapter 269, section 1,	. . . . .	500,000 00
1902, chapter 246, section 1,	. . . . .	500,000 00
1903, chapter 280, section 1,	. . . . .	2,250,000 00
Total, . . . . .		\$6,750,000 00

*Appropriations for the Salaries and Expenses of the Commission, paid from the Treasury of the Commonwealth.*

1898, <sup>1</sup> chapter 579, section 1,	. . . . .	<sup>2</sup> \$14,300 00
1899, chapter 367, section 1,	. . . . .	28,500 00
1900, chapter 141, section 1,	. . . . .	28,500 00
1901, chapter 451, section 1,	. . . . .	33,750 00
1902, chapter 67, section 1,	. . . . .	33,750 00
1903, chapter 14, section 1,	. . . . .	33,950 00

<sup>1</sup> Previous to 1898 the salaries and expenses of the commission were paid out of the State highway loan fund.

<sup>2</sup> This appropriation bill was approved June 23, 1898, and the amount named was for the remainder of the year.



# INDEX.

---

## A.

	PAGE
Appropriation for maintenance recommended, . . . . .	13
Appropriations for salaries and expenses, 1898-1903, inclusive, . . . . .	89
Appropriations for State highway construction, . . . . .	89
Assessments, county, . . . . .	6
Automobile registration, . . . . .	21, 22

## B.

Bridges and culverts, . . . . .	8, 16
---------------------------------	-------

## C.

Claims, statement of, . . . . .	68
Clerical force, . . . . .	21
Completed road, miles of, . . . . .	5
Construction, discussion of methods, etc., . . . . .	7
Construction, table of details of work done, etc., . . . . .	38
Contracts, number of, in 1903, . . . . .	6
Contract prices, table of, . . . . .	62
Cost of State highways, . . . . .	70
County assessments, . . . . .	6
Culverts and bridges, discussion of, . . . . .	8

## D.

Damages, statement of claims for, . . . . .	68
---	----

## E.

Engineering work, office, . . . . .	16
Engineers employed, . . . . .	20, 21
Engineers, resident, work on which employed during 1903, . . . . .	58
Expenditures for construction, . . . . .	22
Expenditures for maintenance, . . . . .	27
Expenditures for repairs to road machinery, . . . . .	35
Expenditures for salaries and expenses, . . . . .	34, 35
Expenditures, summary of, . . . . .	35
Expenditures under "small town" act, . . . . .	32, 33
Expenditures on account of street railways, . . . . .	33

## H.

	PAGE
Hearings, county, . . . . .	6

## L.

Lay-outs made in 1903, . . . . .	5
Lay-outs made, summary of, . . . . .	80
Length of State highway completed, . . . . .	5
Length of roads built under "small town" acts, . . . . .	5
Legislation, new, recommended, . . . . .	17, 18, 19
Lynn road, . . . . .	5, 14

## M.

Maintenance, appropriation for, recommended, . . . . .	13
Maintenance, amounts to be assessed on towns and cities, . . . . .	73
Maintenance, cost of, . . . . .	73
Maintenance, discussion of costs of, etc., . . . . .	9
Meetings of commission, . . . . .	6
Municipalities in which work has been done during 1903, . . . . .	58

## O.

Office engineering work, . . . . .	16
Office expenses, . . . . .	34, 35

## P.

Petitions, . . . . .	6, 80
Petitions received during 1903, . . . . .	6
Petitions, distribution of, and lengths of road petitioned for, . . . . .	80
Prices, contract, in 1903, table of, . . . . .	62

## R.

Registration of automobiles, . . . . .	21, 22
Repairs and maintenance (see maintenance).	
Resident engineers employed during 1903, list of, . . . . .	58
Road machinery, discussion of use of, . . . . .	15
Road rollers, work done by, . . . . .	15

## S.

"Small town" work, . . . . .	13, 81
Steam road rollers, . . . . .	15
Street railways, . . . . .	6
Stone crushers, . . . . .	15
Surveys, . . . . .	16













